

Substance Use Disorders: What Research has Taught Us About Treatment.

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**Behavioral Health Services Subcommittee
Santa Fe, New Mexico
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Addiction

DRUGS



Medical

NEUROTOXICITY
OBESITY
AIDS
CANCER
MENTAL ILLNESS



Economic

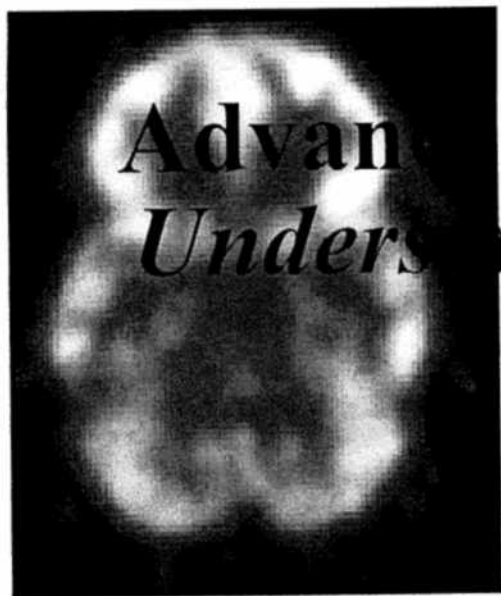
HEALTH CARE
COSTS
PRODUCTIVITY
LOSS
ACCIDENTS



Social

HOMELESSNESS
CRIME
VIOLENCE

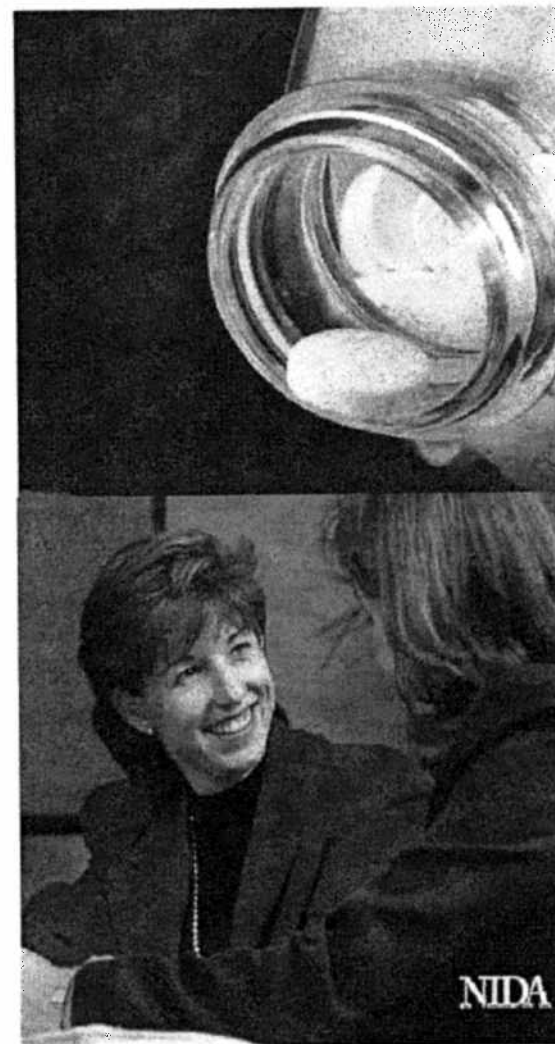
Advances in Science
Have Revolutionized Our
Fundamental Views of
Drug Abuse and Addiction



**Advances in Science Are Bringing Us New
*Understanding of Drug Abuse & Addiction***

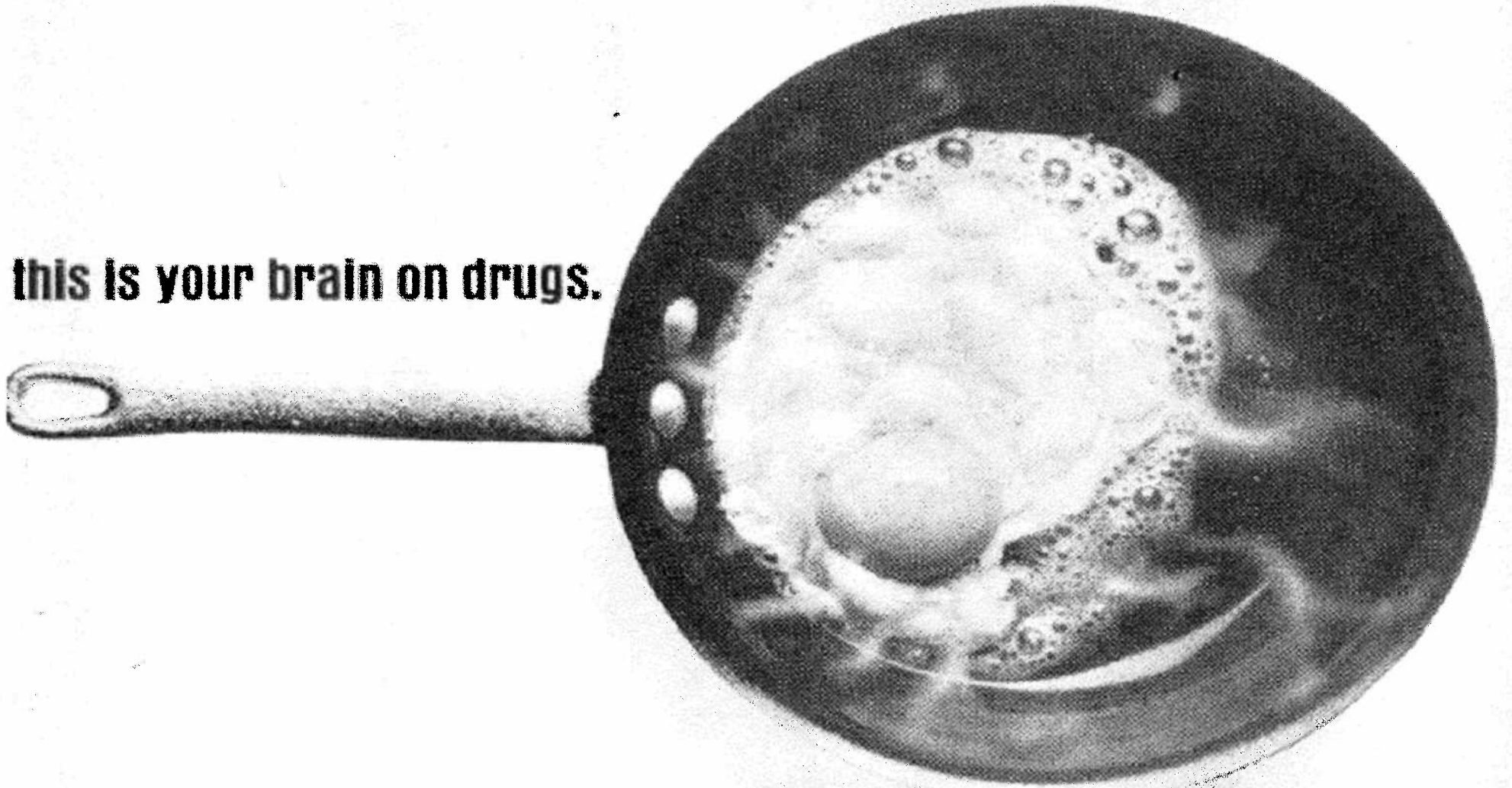
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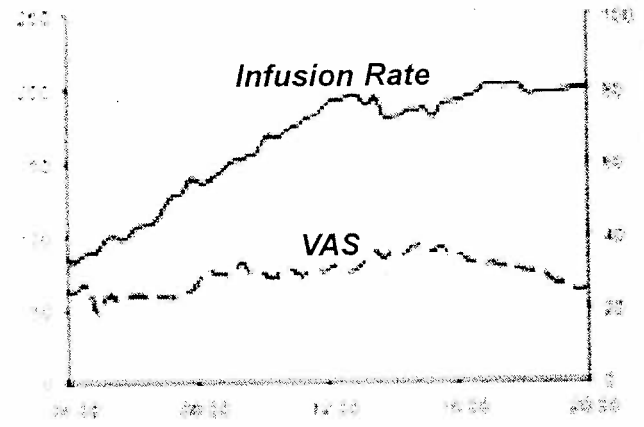
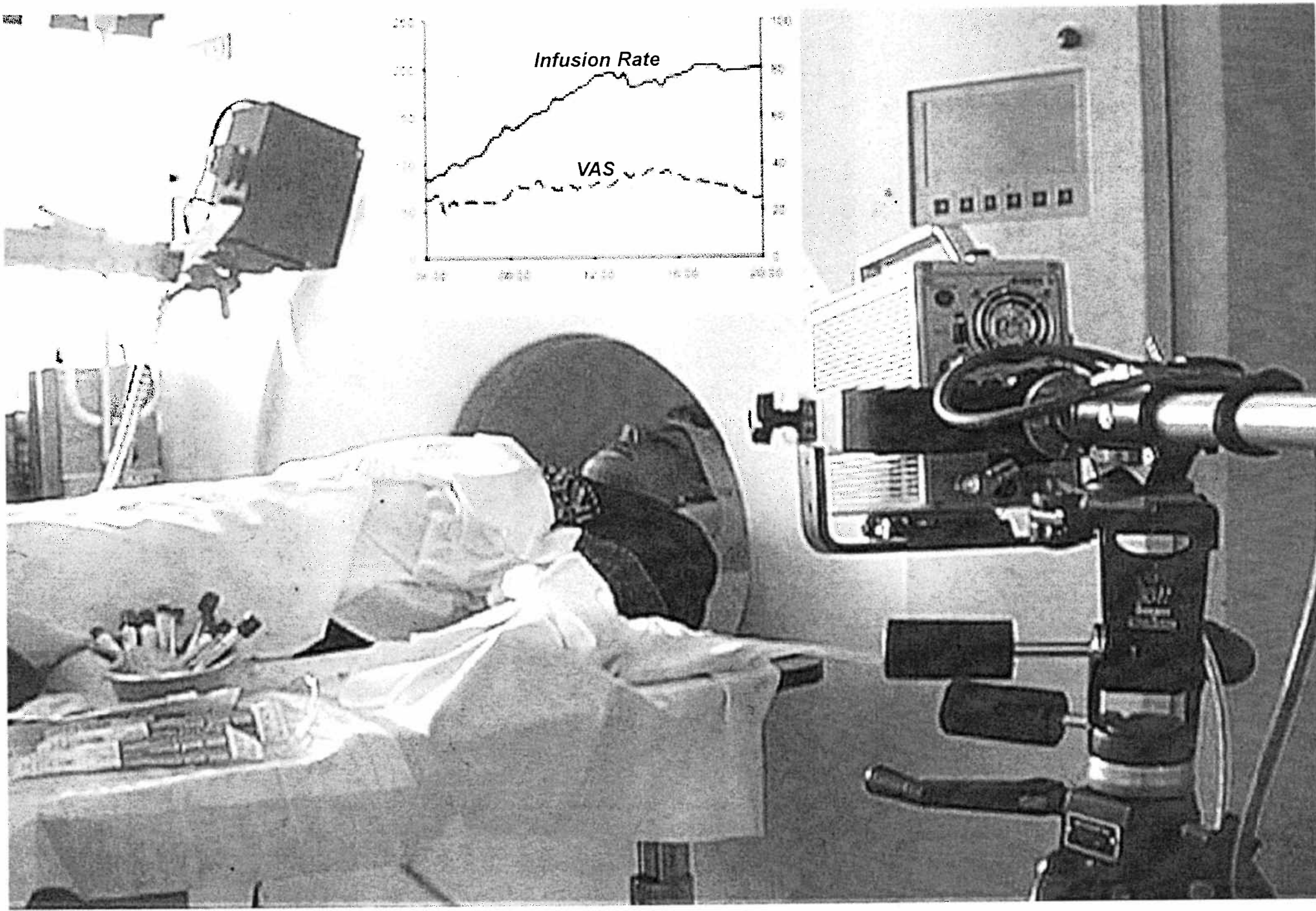
**This Knowledge Is Allowing
Us To Develop More
Targeted Strategies for Its
Prevention and Treatment**



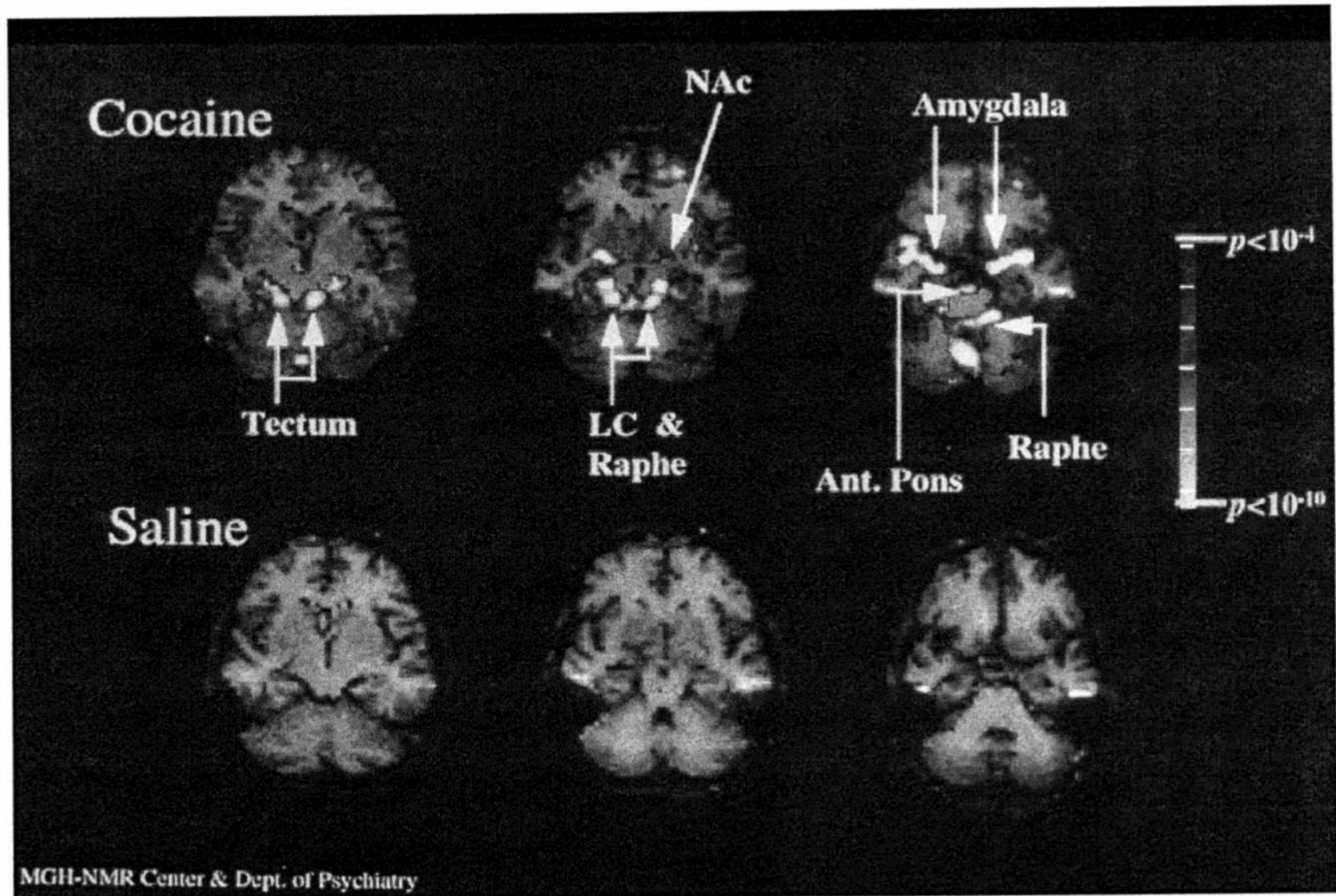
Your Brain on Drugs - Then

this is your brain on drugs.





Your Brain on Drugs – Now



Source: Breiter & Rosen, Ann N Y Acad Sci 1999

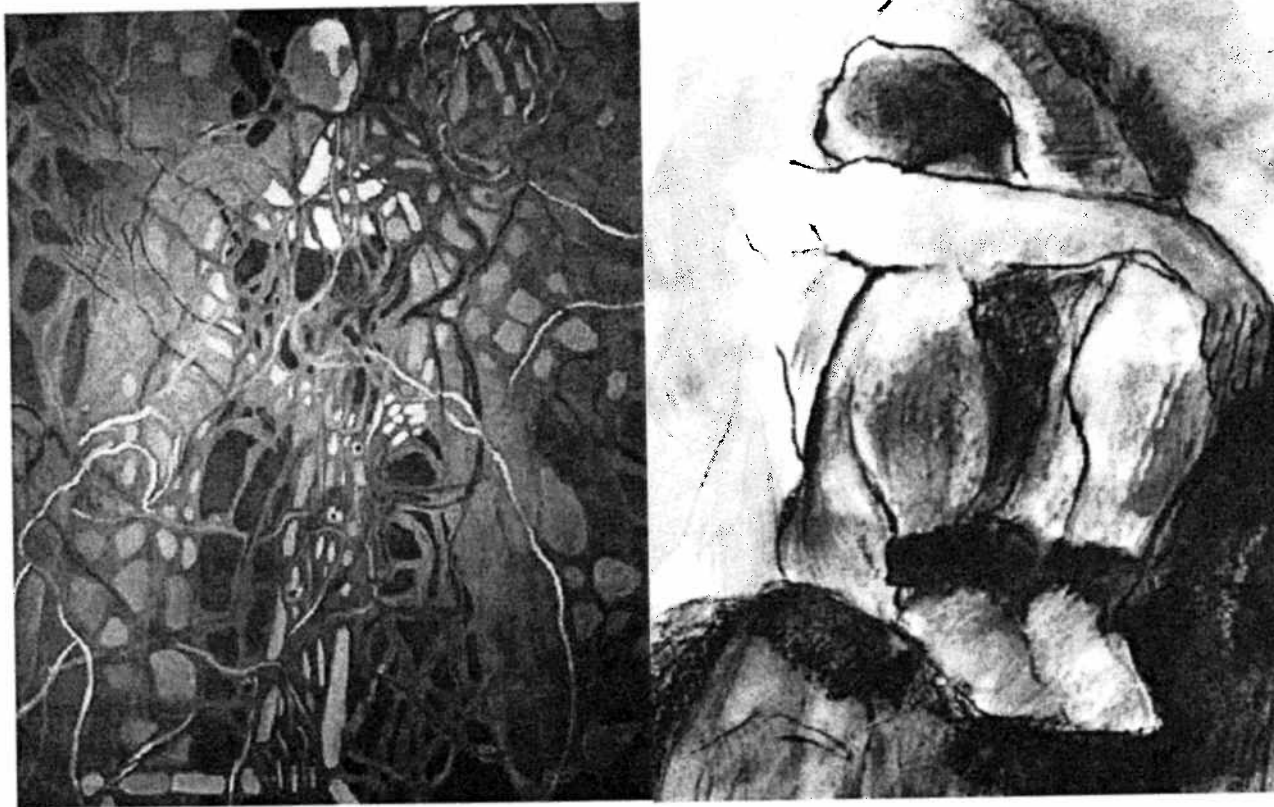
What have we learned?

Drug Abuse is a Preventable Behavior

Drug Addiction is a Treatable Disease

Why do people take drugs?

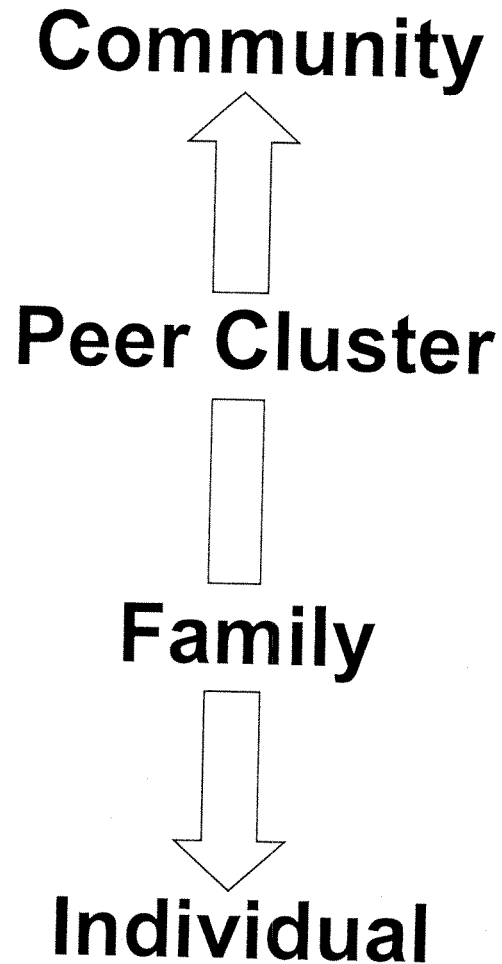
To feel good
To have novel:
Feelings
Sensations
Experiences
AND
To share them

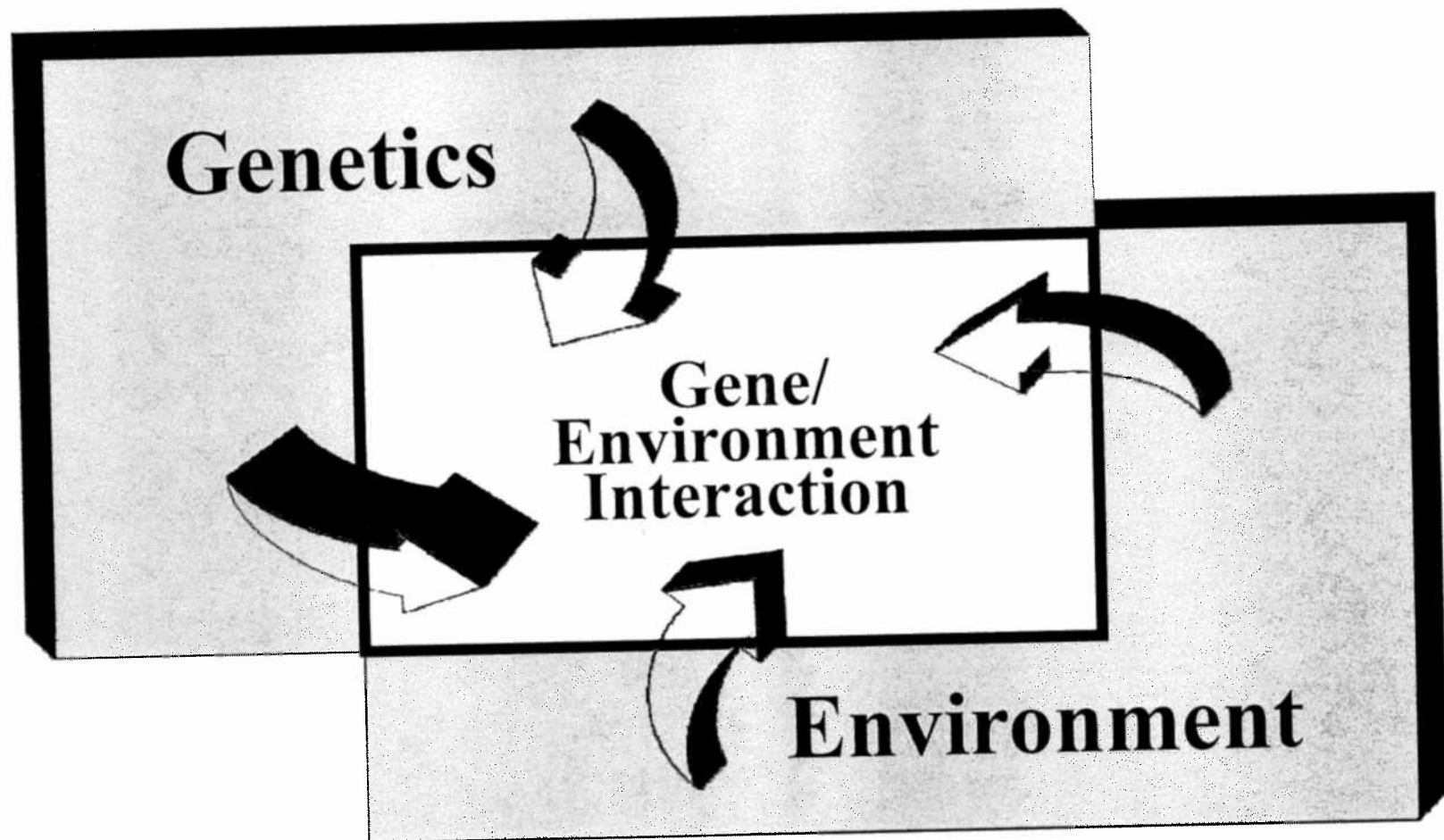


To feel better
To lessen:
Anxiety
Worries
Fears
Depression
Hopelessness
Withdrawal

Drawings courtesy of Vivian Felsen

Drug Abuse Risk Factors





*Science Has Generated A Lot of
Evidence Showing That...*

**Prolonged Drug Use Changes
the Brain In Fundamental
and Long-Lasting Ways**

Circuits Involved In

CONTROL

INHIBITORY

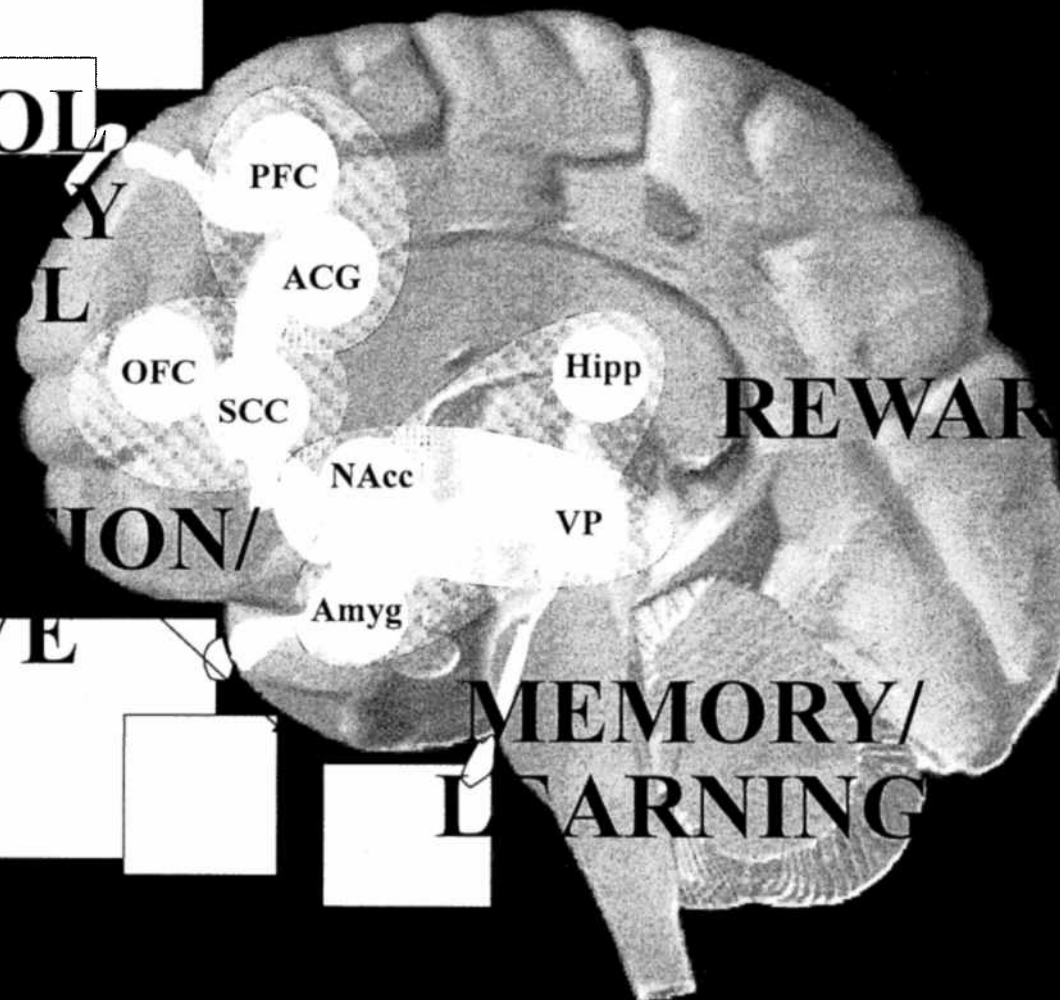
CONTROL

MOTIVATION/

DETERMINATIVE

REWARD

MEMORY/
LEARNING



That's Why Addicts Can't Just Quit

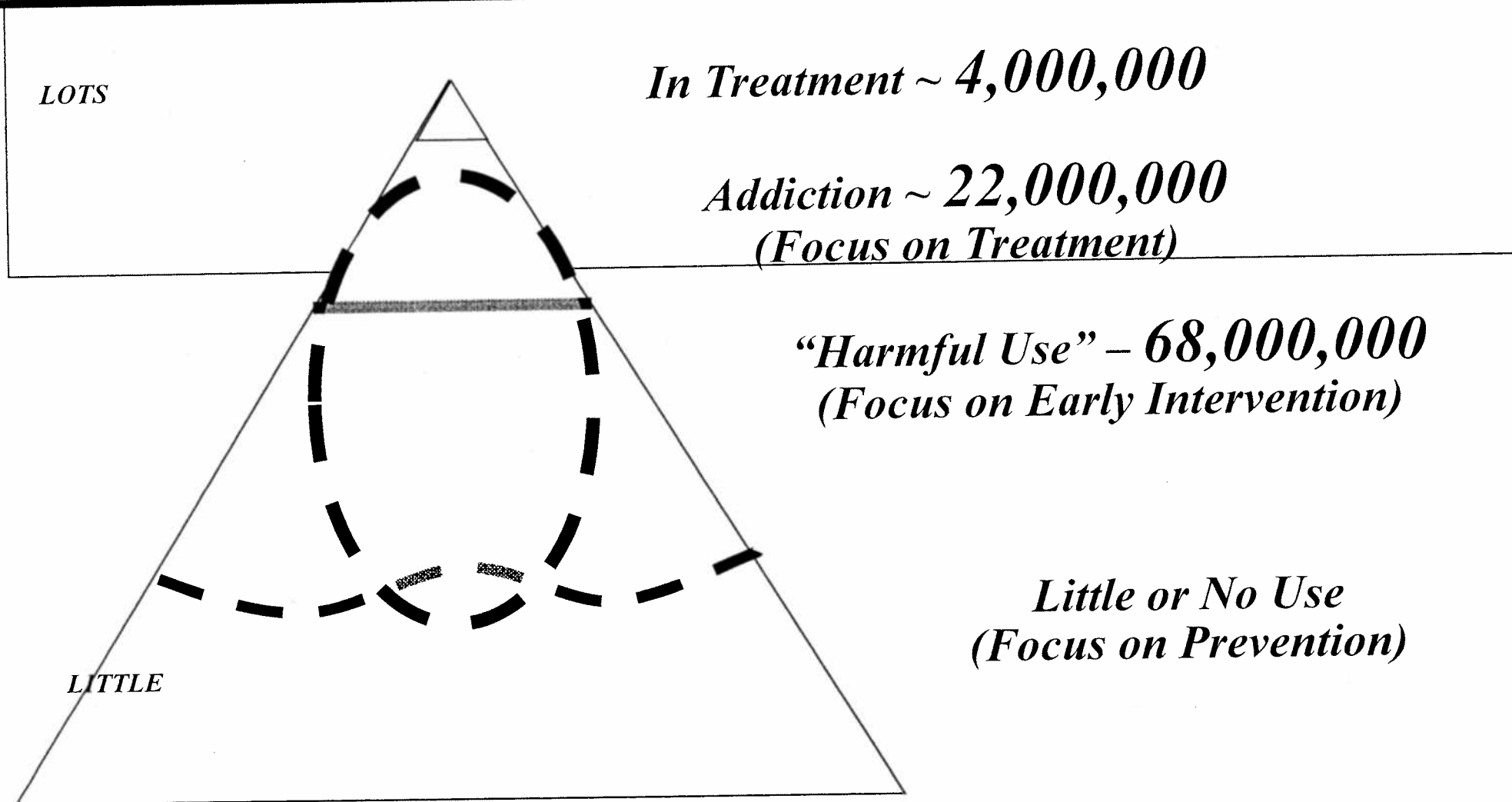
That's Why Treatment Is Essential!

Addiction is the
Quintessential
Biobehavioral Disorder

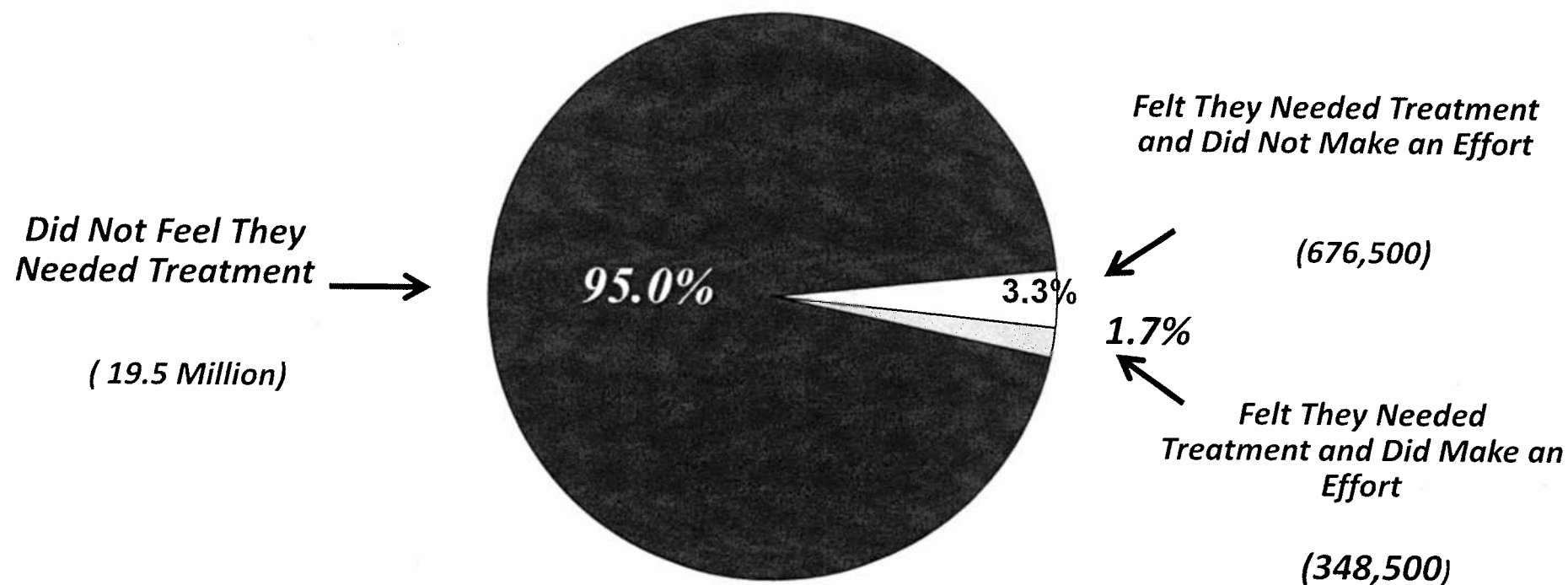
The Most Effective Intervention Strategies Will Attend to All Aspects of Addiction:

- **Biology**
- **Behavior**
- **Social Context**

Different approaches for different levels of Severity

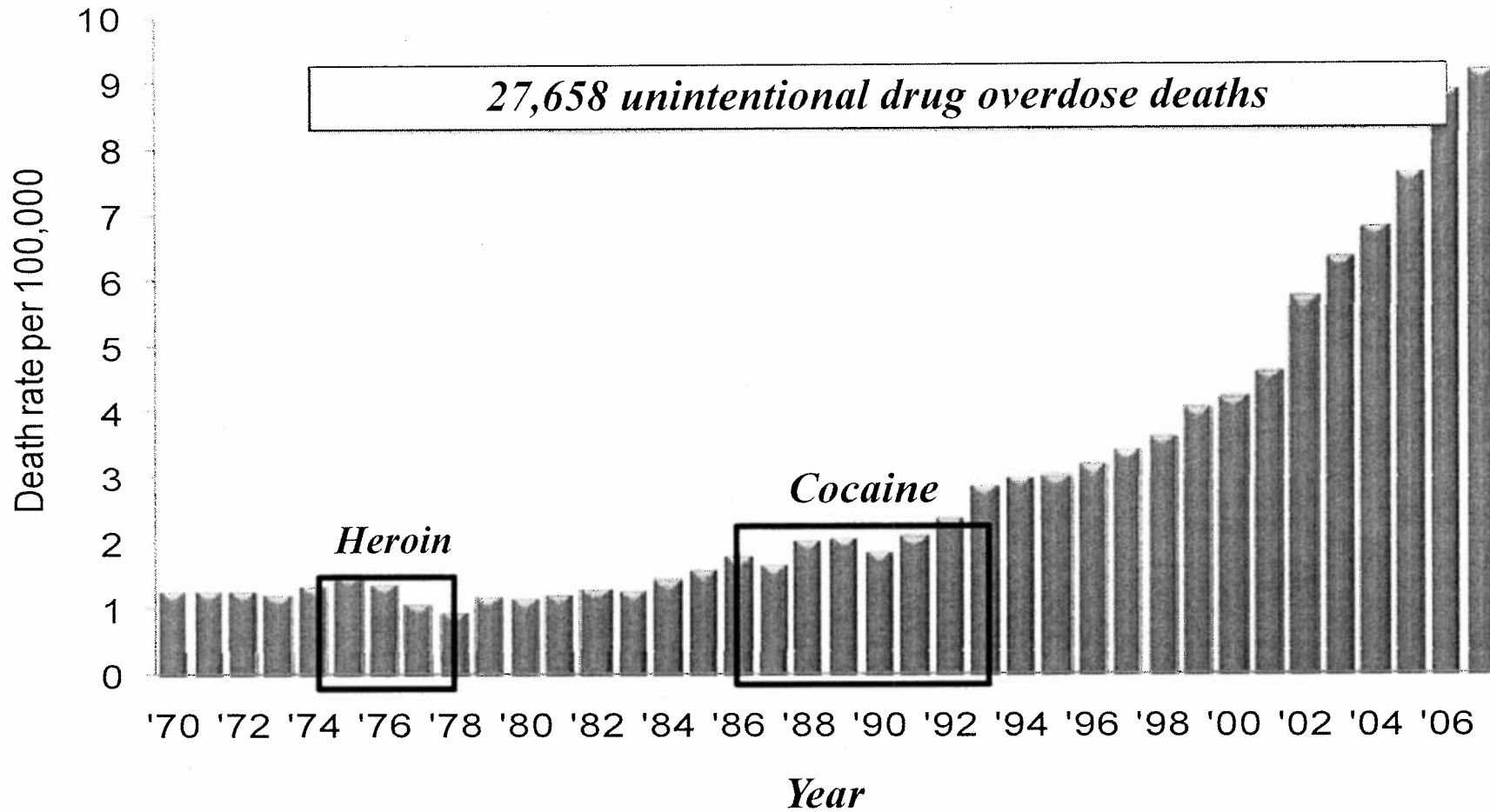


Past Year Perceived Need for and Effort Made to Receive Specialty Treatment among Persons Aged 12 or Older Needing But Not Receiving Treatment for Illicit Drug or Alcohol Use: 2010

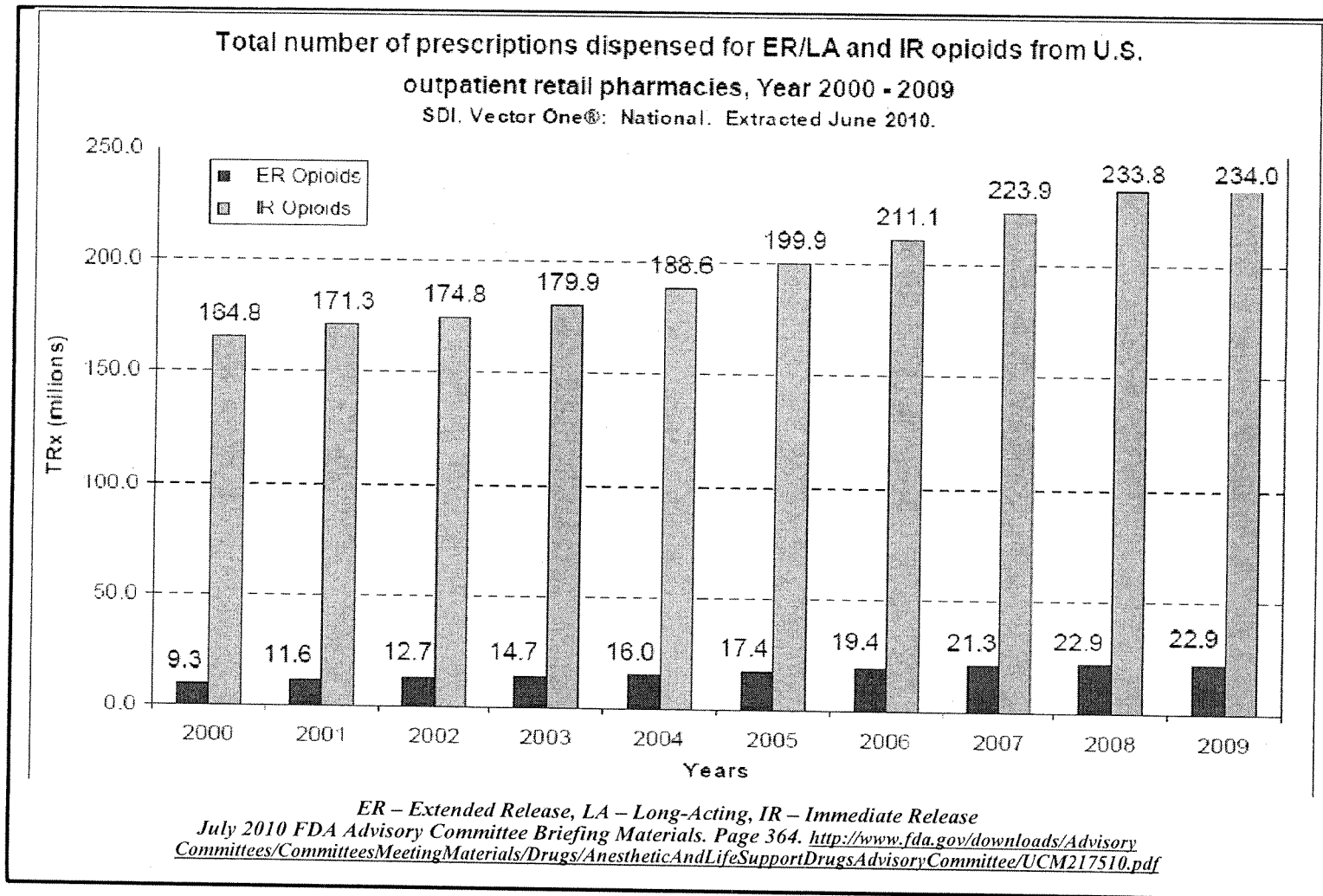


**20.5 Million Needing But Not Receiving Treatment
for Illicit Drug or Alcohol Use**

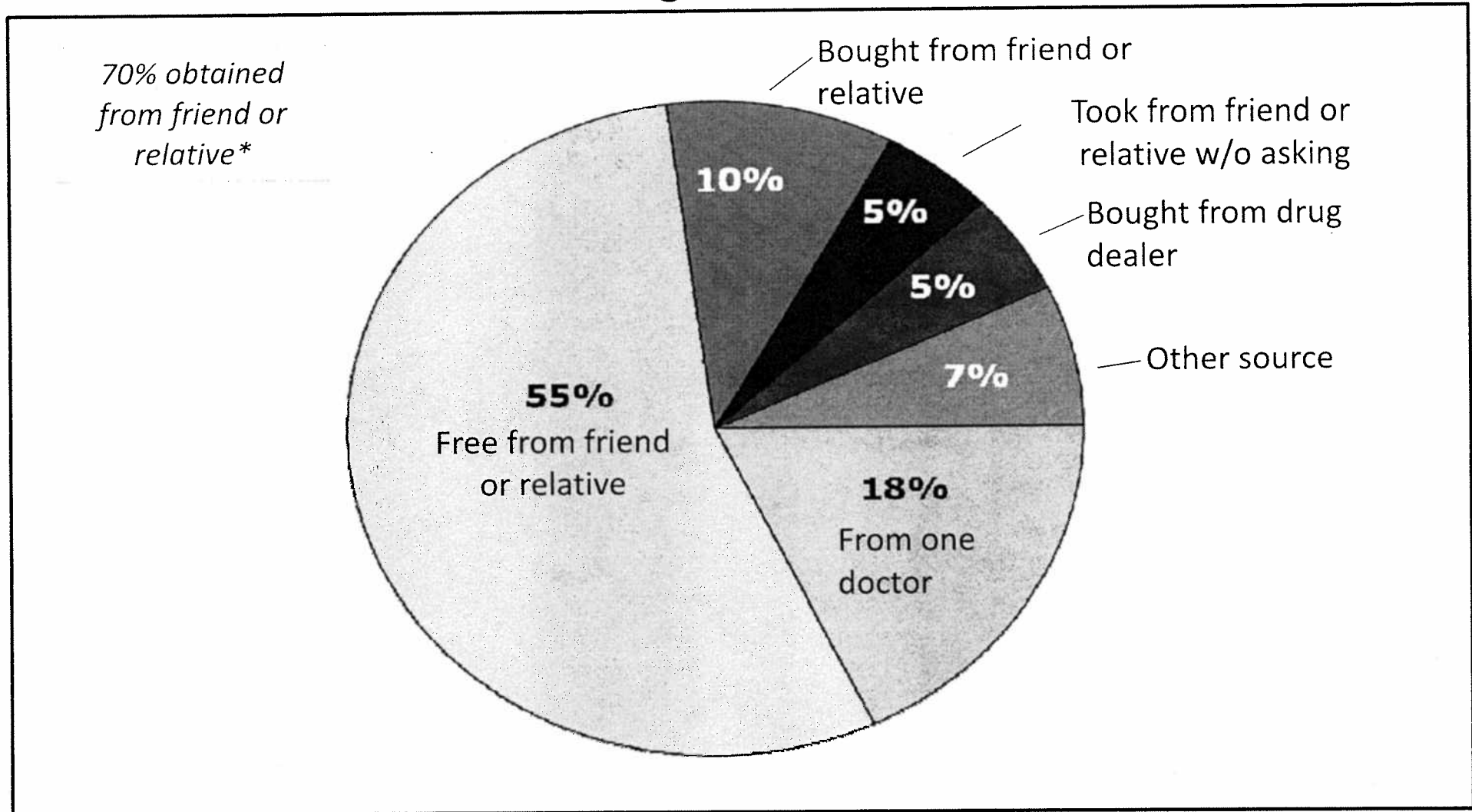
Unintentional Drug Overdose Deaths United States, 1970–2007



Pain Reliever Prescriptions: 2000-2009



Source of Pain Relievers for Most Recent Nonmedical Use Among Past Year Users



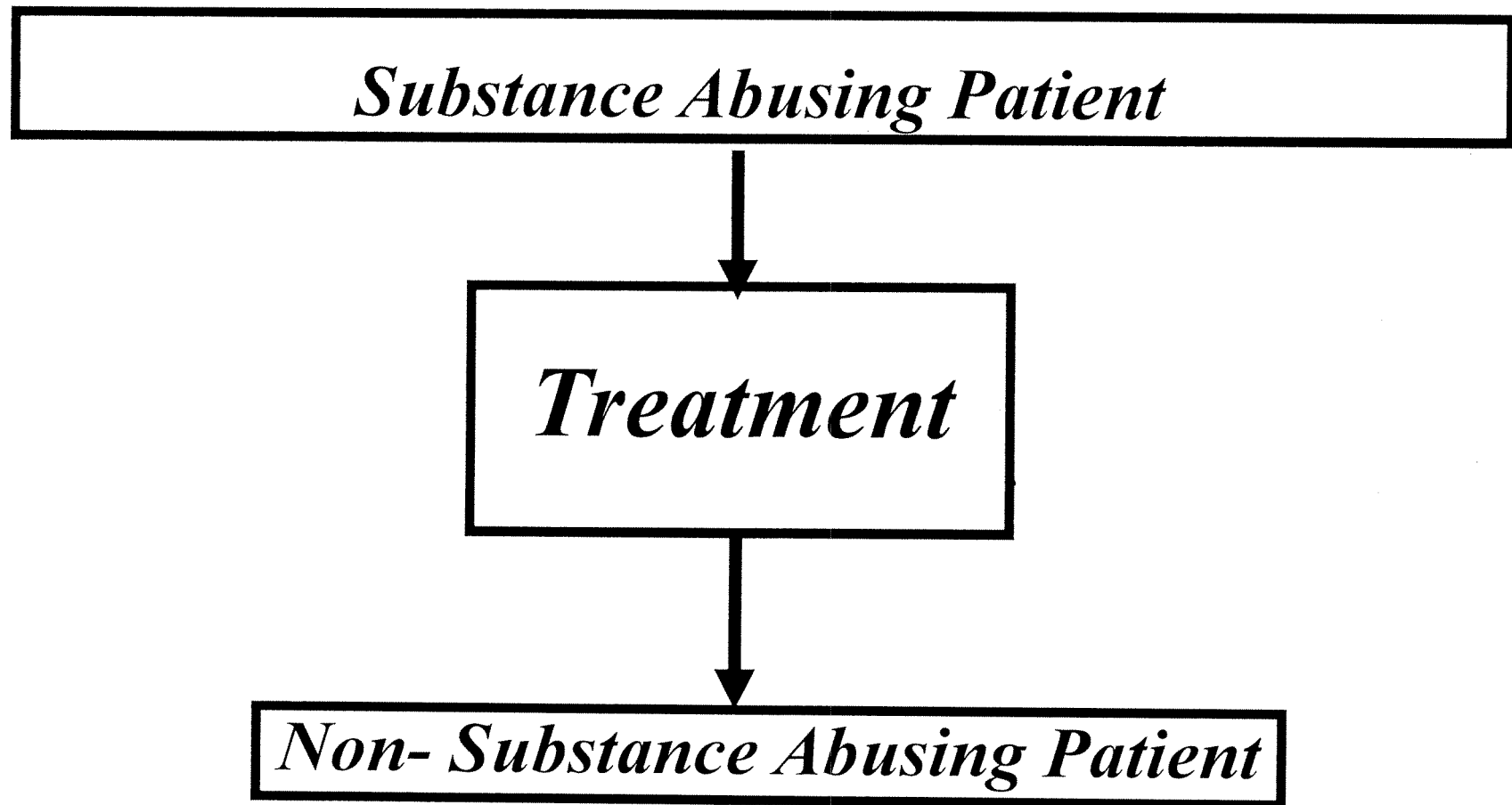
*Percentage from friend or relative is derived before rounding of individual components.

Source: SAMHSA, 2009 National Survey on Drug Use and Health (September 2010).

**So what have we learned that can
address this critical problem?**

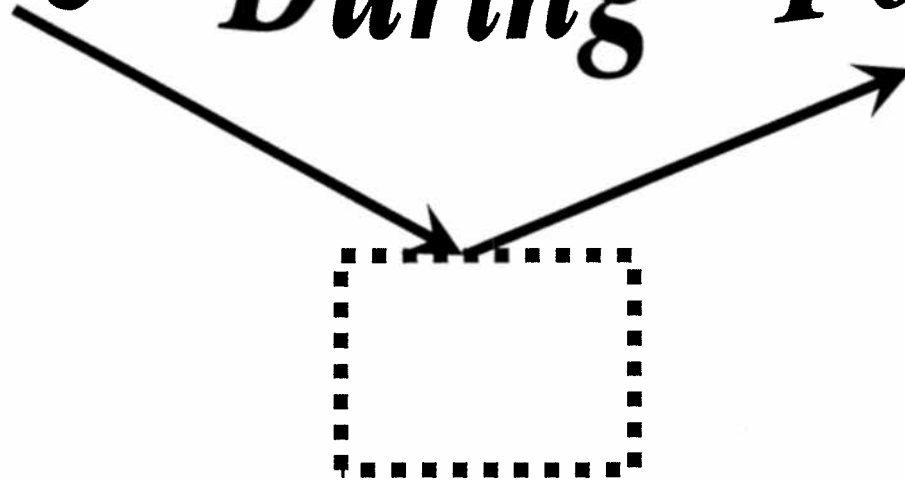
**We Need to View and Treat Addiction
As A Chronic, Relapsing Illness**

The Acute Care Treatment Model



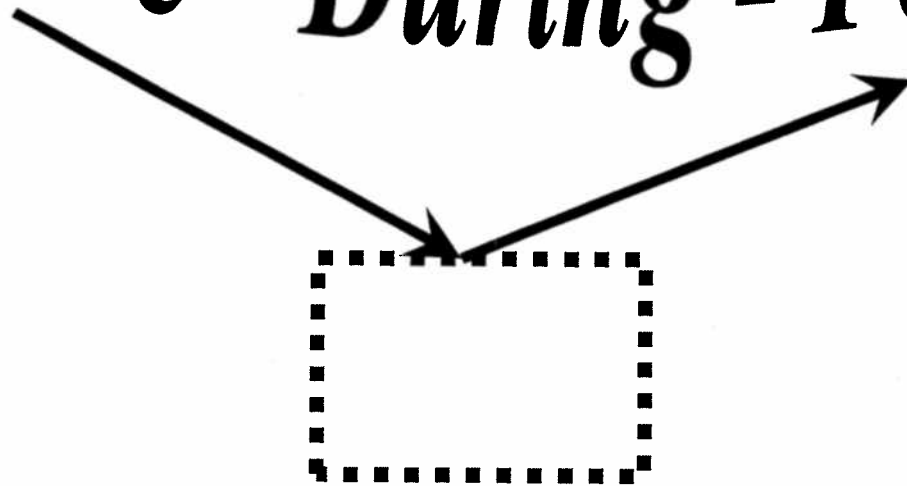
Outcome In Diabetes

Pre - During - Post



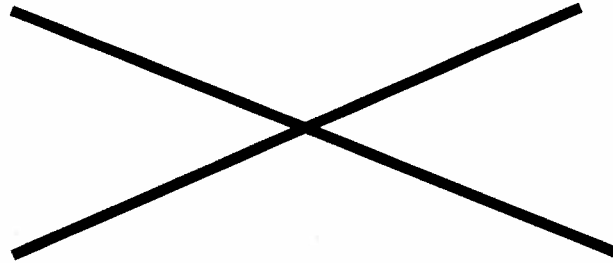
Outcome In Hypertension

Pre - During - Post

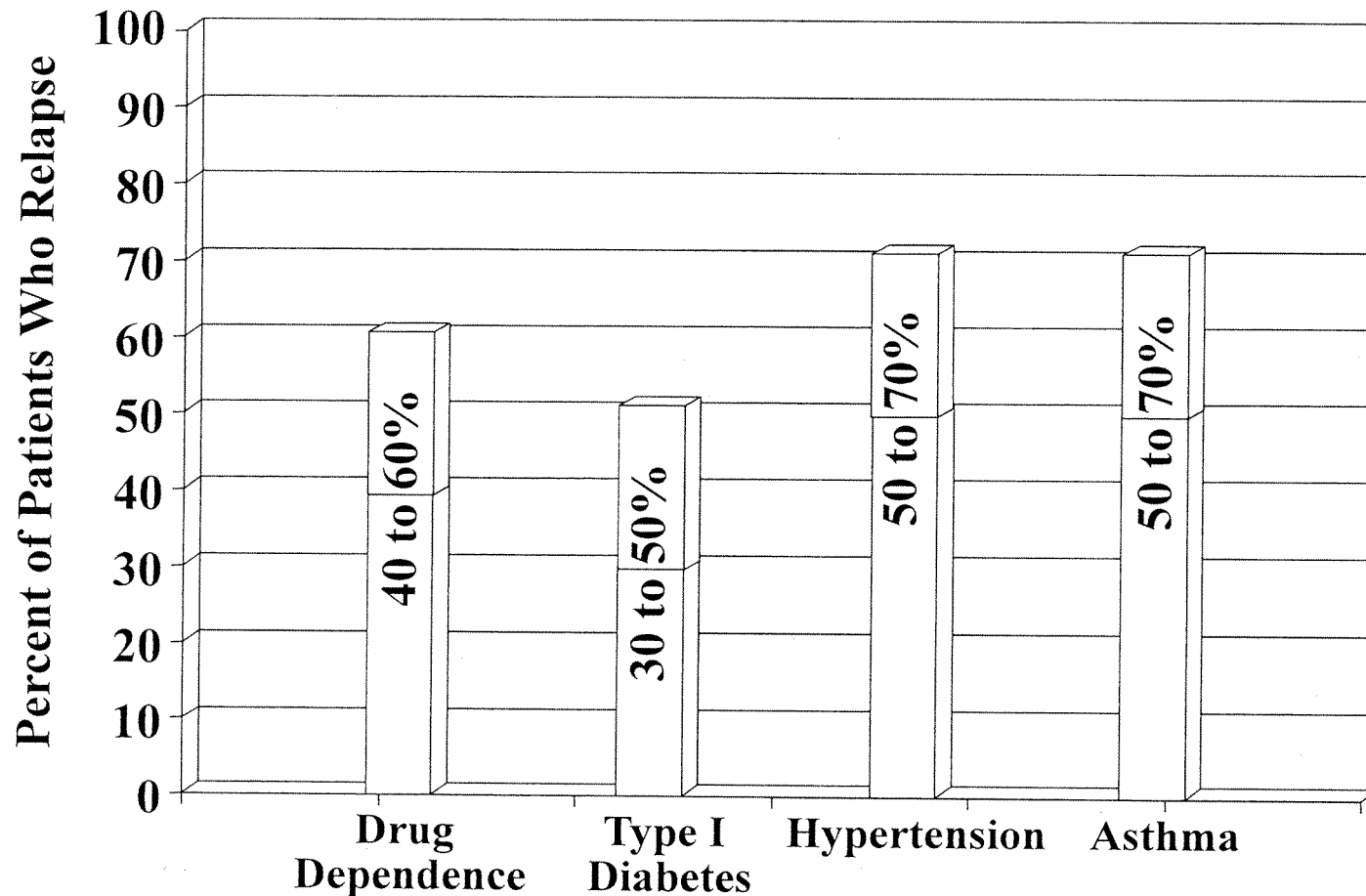


Outcome In Addiction

Pre - Post



Relapse Rates Are Similar for Drug Dependence and Other Chronic Illnesses



Source: McLellan, A.T. et al., JAMA, Vol 284(13), October 4, 2000.

Addiction vs. Other Chronic Illnesses

- Recovery can be long-term process
- May require multiple episodes of treatment
- May require “check ups” for sustained recovery
- Relapses can occur
- Participation in self-help support program is helpful for abstinence (NIDA, 2000)

**If we treat a diabetic and symptoms don't
subside....what do we do?**

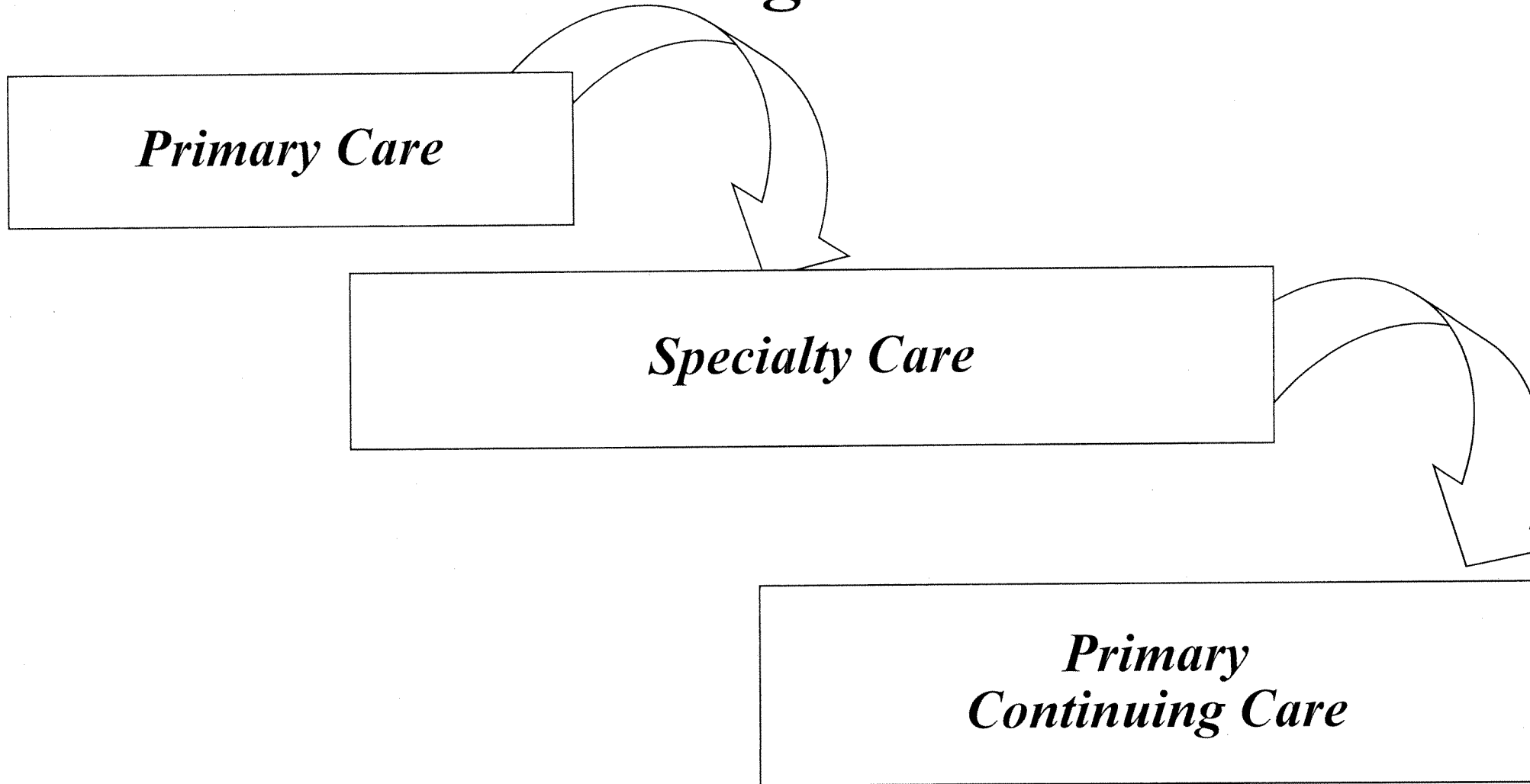
Would we increase the dose?

Would we change medications?

Would we change treatment approaches?

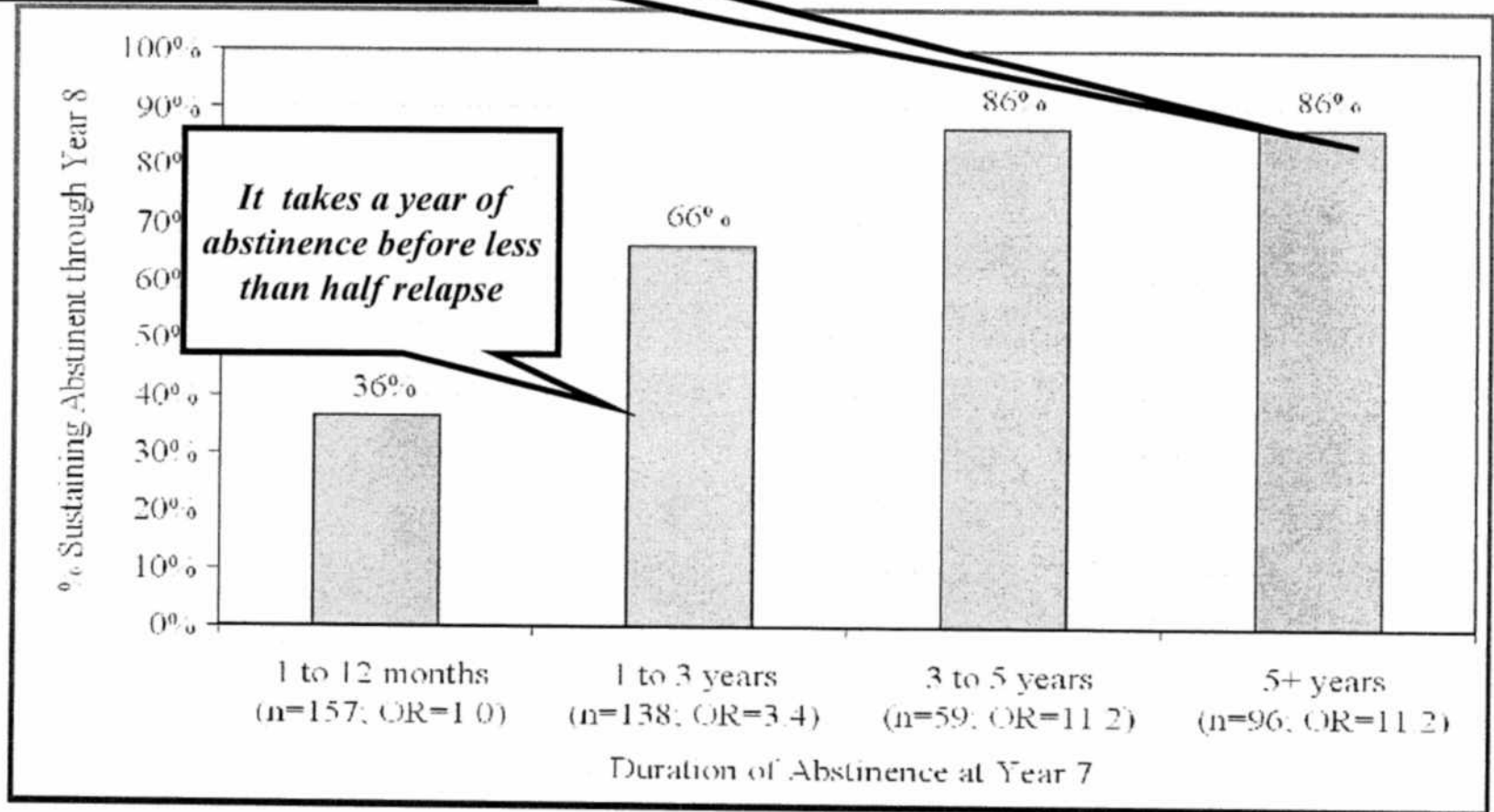
**Would we fail to provide ongoing
treatment for a diabetic?**

A Continuing Care Model

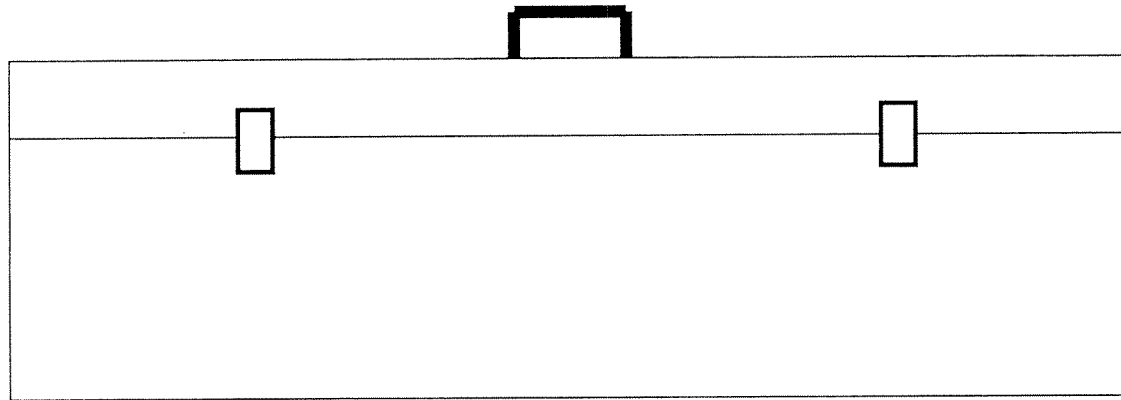


Longitudinal Trends in Recovery (Pathways $N=1326$)

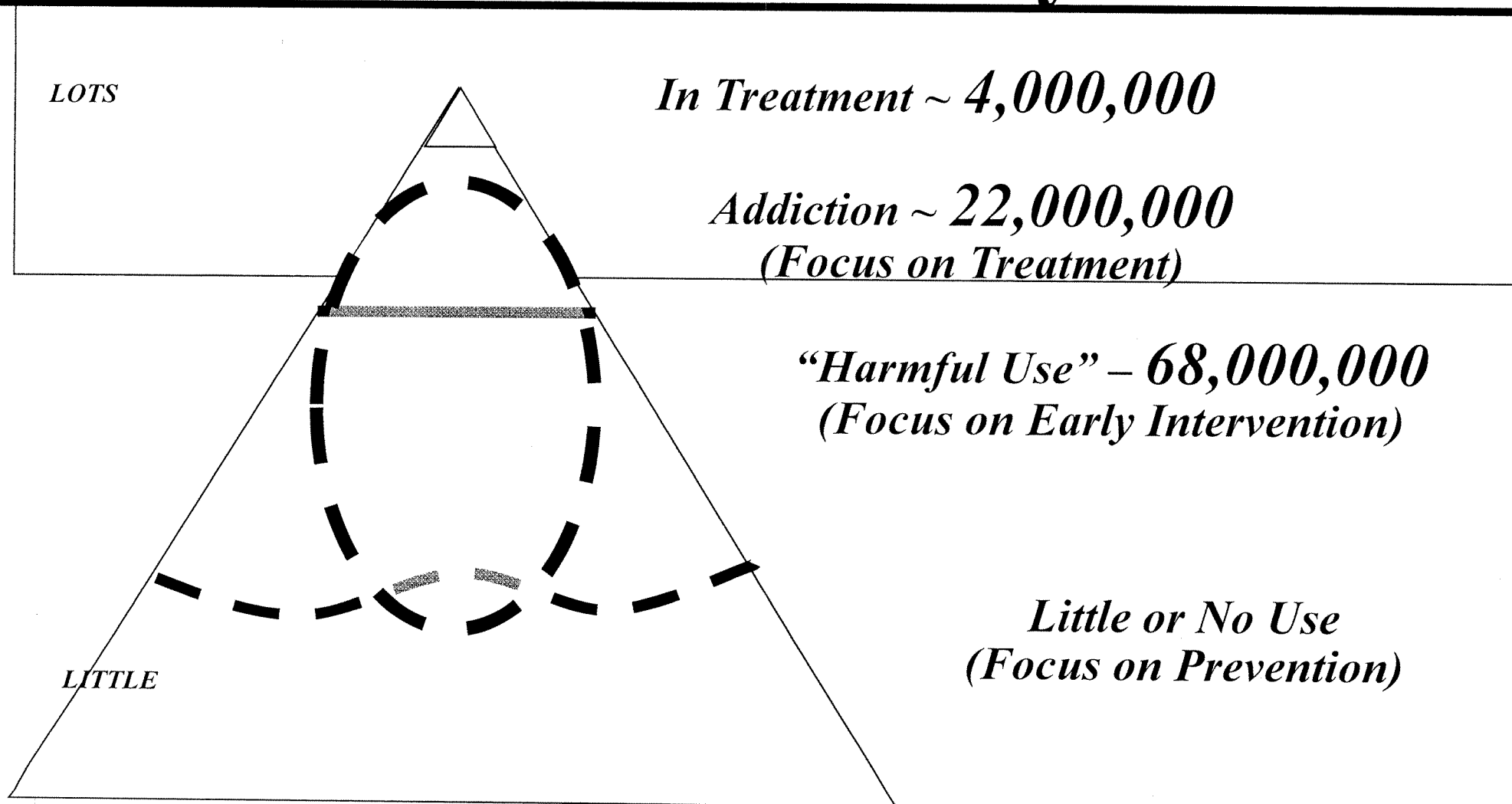
After 5 years – if you are sober, you probably will stay that way.



We Have A Variety Of Effective Treatment Options In The Clinical Toolbox



Different approaches for different levels of Severity



For those not yet addicted...

- We need attractive, accessible interventions to prevent “harmful use” from becoming “addiction.”
- *Screening and Brief Interventions* in primary care offices

Major Advances in Brief Interventions

- “Harmful use” identified in 2–3 questions.
 - Prevalence rates of **20 – 50%** in healthcare
 - **60%** of all ER admissions (10 million/yr)
- Brief counseling (10 minutes) produces big savings
 - Medicaid savings **\$8 million** /year Washington

For those who are already addicted....

- We do not have a cure... But we do have effective treatments
- We need **continuing care** to prevent relapse & promote self-management.
- *But we don't have the system to deliver that kind of care!*

EFFICACIOUS BEHAVIORAL TREATMENTS FOR DRUG DEPENDENCE

- **COGNITIVE BEHAVIORAL THERAPY** (cocaine dependence)- also for benzodiazepine withdrawal in panic disorder patients
- **MOTIVATIONAL INTERVIEWING / MOTIVATIONAL ENHANCEMENT THERAPY** (developed at UNM)
- **CONTINGENCY MANAGEMENT (WITHOUT CRA)** (methadone-maintained opiate & cocaine abusers)
- **LOWER-COST CONTINGENCY MANAGEMENT** (cocaine dependent people in methadone-maintenance)

EFFICACIOUS BEHAVIORAL TREATMENTS FOR DRUG DEPENDENCE

- **BRIEF STRATEGIC FAMILY THERAPY** (certain sub-populations of Hispanic adolescent polydrug abusers)
- **MULTIDIMENSIONAL FAMILY THERAPY** African-American polydrug-abusing adolescents)
- **BEHAVIORAL COUPLES THERAPY** (methadone-maintained opioid-addicted men; drug-abusing women)
- **12-STEP FACILITATION** (manualized)

Medications for Nicotine Addiction Treatment

- Bupropriion (Wellbutrin, Zyban)
- Varenicline (Chantix)
- Nicotine Replacement Therapy
(gum, lozenge, patch, inhaler)

Medications for Alcohol Addiction Treatment

- Disulfiram (Antabuse)
- Oral naltrexone (Revia)
- Injectable extended release naltrexone (Vivitrol)
- Acamprosate (Campral)

Medications for Cocaine & Methamphetamine Addiction Treatment

- None are approved by the FDA
- Several medications have shown promising results
- Several compounds are under development

Medications for Opioid Addiction Treatment

- Methadone
- Buprenorphine (Subutex)
- Buprenorphine/Naloxone (Suboxone)
- Oral Naltrexone (Revia)
- Injectable extended release Naltrexone (Vivitrol)

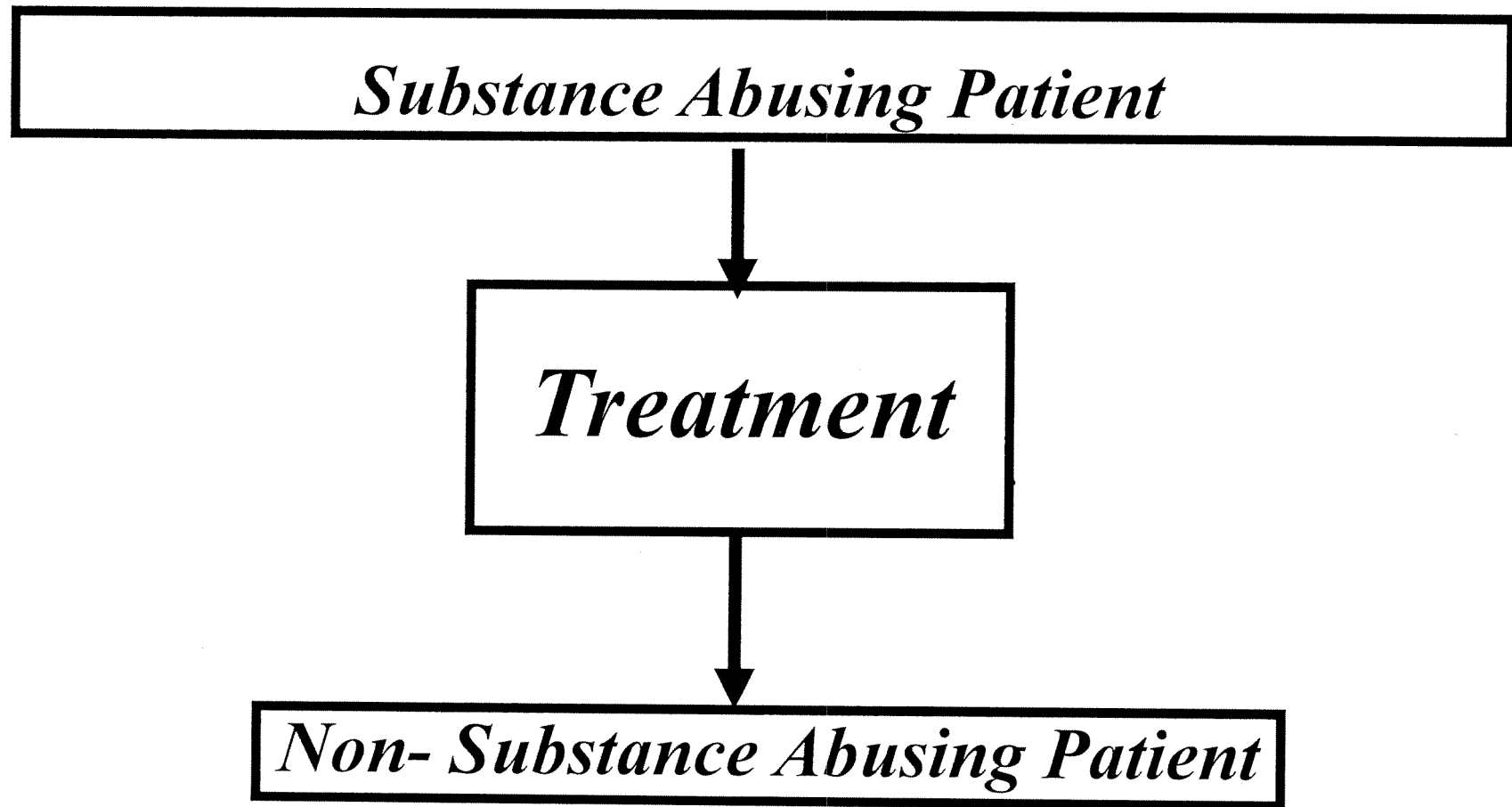
Opioid Antagonist Treatment

- Oral Naltrexone
 - Highly effective pharmacologically
 - Hampered by poor patient adherence
 - Useful for highly motivated patients
- Injectable formulation (Vivitrol ®)
 - FDA-approved alcohol dependence and opiate dependence
 - Effective for about 30 days

Medications for Addiction Treatment: Highly Studied

Name of Med	Cochrane Reviews	# Scientific Papers in Pub Med
Antabuse	NO	3,640
Naltrexone	YES	7,215
Acamprosate	YES	552
Methadone	YES	11,784
Buprenorphine	YES	3,869

The Acute Care Treatment Model



A Continuing Care Model

Primary Care



```
graph TD; A[Primary Care] --> B[Specialty Care]; B --> C[Primary Continuing Care];
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The diagram illustrates a three-stage care model. It begins with a box labeled 'Primary Care' in the upper left. A curved arrow points from this box to a second box labeled 'Specialty Care' in the center. From the 'Specialty Care' box, another curved arrow points to a third box labeled 'Primary Continuing Care' in the lower right. The boxes are arranged in a descending staircase pattern from top-left to bottom-right.

Specialty Care

*Primary
Continuing Care*

Detox is NOT Treatment

It is a part of treatment

Treatment Does Not Equal Recovery

- Treatment is part of recovery – but it is not equal to recovery.
- The goal of treatment is absence of symptoms; the goal of recovery is holistic health.
- Treatment alone does not address other challenges, such as family, employment, housing, etc.
- Recovery is different for each individual, and the social determinants of health need to be addressed before the recovery process can move forward.

The Recovery Process

Recovery from alcohol and drug problems is a **process of change** through which an individual achieves abstinence and improved health, wellness, and quality of life.

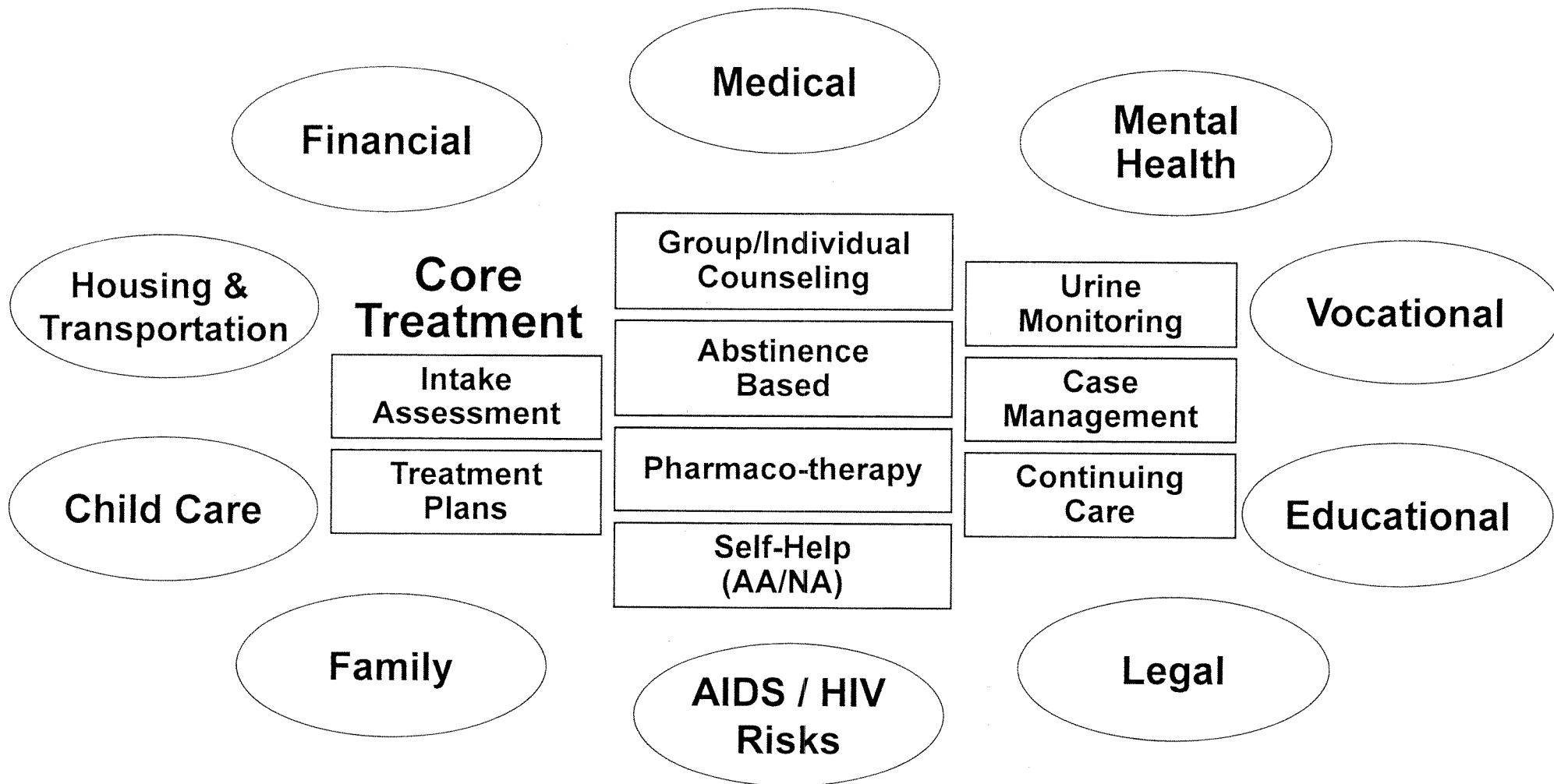
Challenges for a Traditional Approach

- Traditional treatment approaches provide challenges that translate into less cost-effective use of funds:
- 56.8% of those admitted to U.S. public substance abuse treatment programs in 2009 were re-entering treatment:
 - 21.3% for the second time, 19.1% for the third or fourth time, and 16.4% for the fifth or more time.¹
- One recent study found that median time from first treatment to 1 alcohol- and drug-free year was 9 years — with 3 to 4 episodes of treatment.²

¹SAMHSA, Office of Applied Studies. *Treatment Episode Data Set (TEDS). Highlights - 2009. National Admissions to Substance Abuse Treatment Services*

²Dennis, M.L. et al, 2005. *The duration and correlates of addiction and treatment careers*, *Journal of Substance Abuse Treatment* 28 (Suppl. 1): S51-S62

Drug Abuse Treatment Core Components and Comprehensive Services



Etheridge, Hubbard, Anderson, Craddock, & Flynn, 1997 (PAB)

Values Underlying Recovery Oriented Systems of Care (ROSC)

- Person-centered
- Self-directed
- Strength-based
- Participation of family members, caregivers, significant others, friends, and the community
- Individualized and comprehensive services and supports
- Community-based services and supports

Examples of Recovery Support Services

- Employment services and job training
- Case management individual services coordination, with linkages to other services
- Relapse Prevention
- Housing assistance & services
- Child care
- Parent education & child development support services
- Transportation to and from treatment, recovery support activities, employment, etc.
- Family/marriage counseling
- Education (including substance abuse education)
- Peer-to-peer mentoring and coaching
- Self-help & support groups (including spiritual & faith-based)

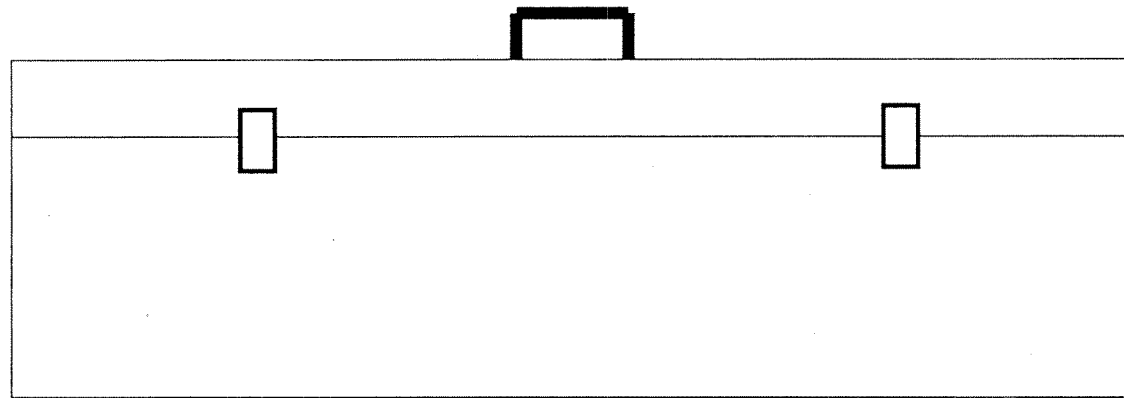
The Importance of Evidence-Based Practices in ROSC

- One of ROSC's Operational Elements – Service quality and responsiveness – relies on the use of evidence-based practices.
- Evidence-Based Practices (EBPs) provide scientifically-validated evidence that the program is effectively meeting goals.
- Why use EPBs?
 - When services are informed by the best available evidence, the quality of care is improved.
 - Using EBPs increases the likelihood that desired outcomes will be obtained.
 - By employing these practices, available resources are often used more efficiently.

National Registry of Evidence-based Programs and Practices (NREPP)

- The National Registry of Evidence-based Programs and Practices (NREPP) is a searchable online registry of mental health and substance abuse interventions that have been reviewed and rated by independent reviewers.
- The NREPP website helps states, territories, community-based organizations, and others to identify service models that may address your particular regional and cultural needs, and match your specific resource capacity.
- In December 2009, a new search feature was added to the NREPP Web site that allows users to identify NREPP interventions that have been evaluated in comparative effectiveness research studies.
- <http://www.nrepp.samhsa.gov/>

We Have A Variety Of Effective Treatment Options In The Clinical Toolbox



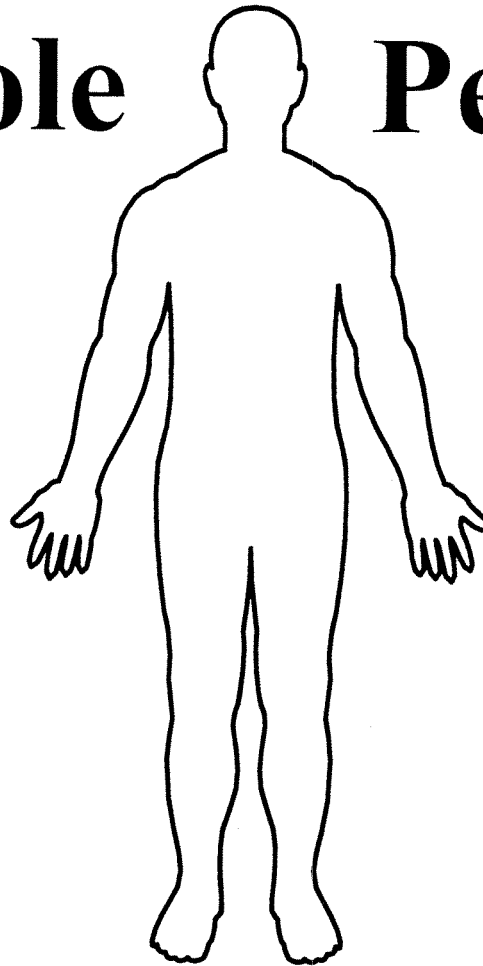
**...But We Need To And Can
Do Better**

**Treating A Biobehavioral Disorder
Must Go Beyond Just
Fixing The Chemistry**

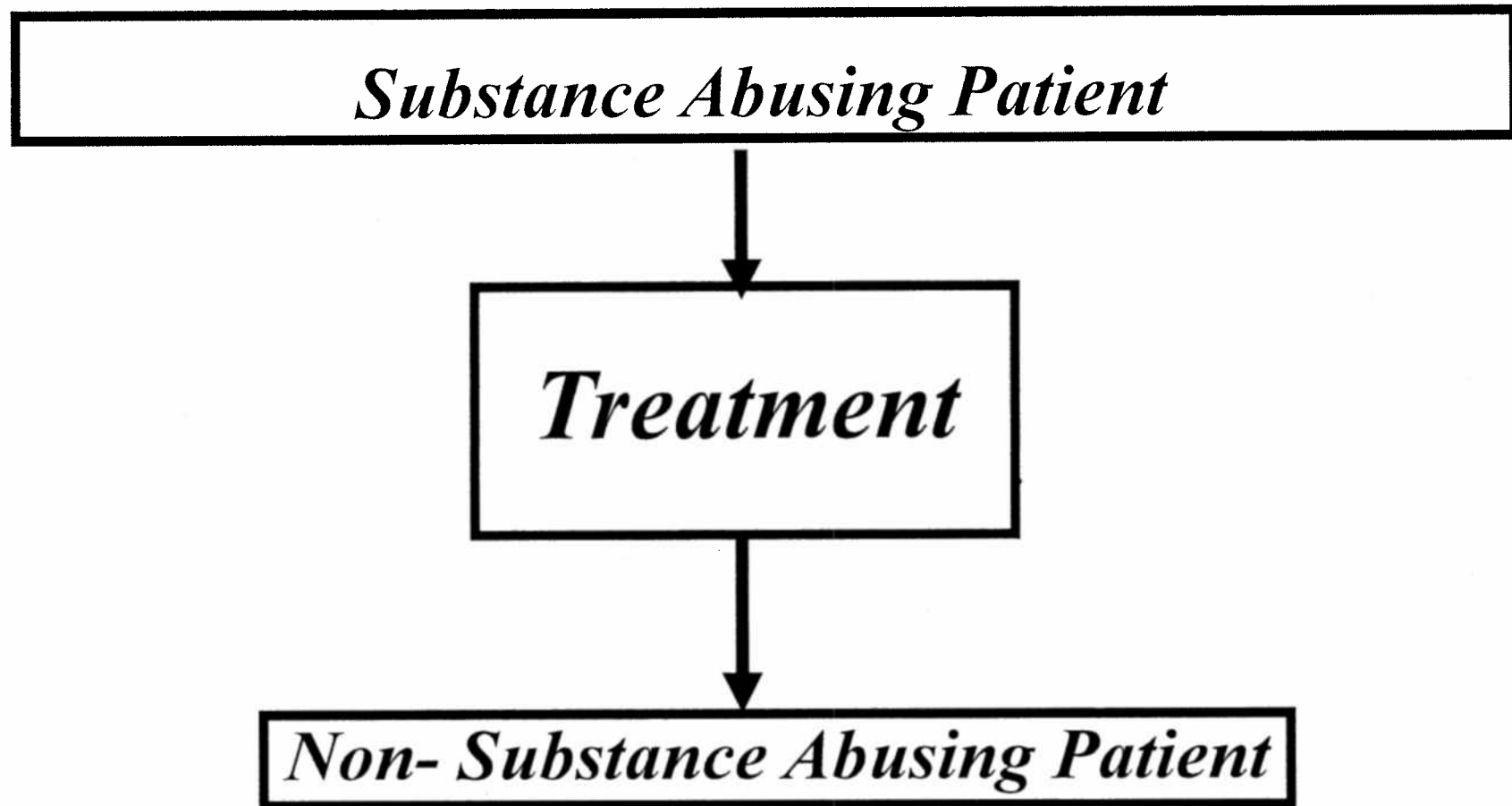
The Most Effective Treatment Strategies Will Attend to All Aspects of Addiction:

- **Biology**
- **Behavior**
- **Social Context**

**We Need to Treat the
Whole Person!**

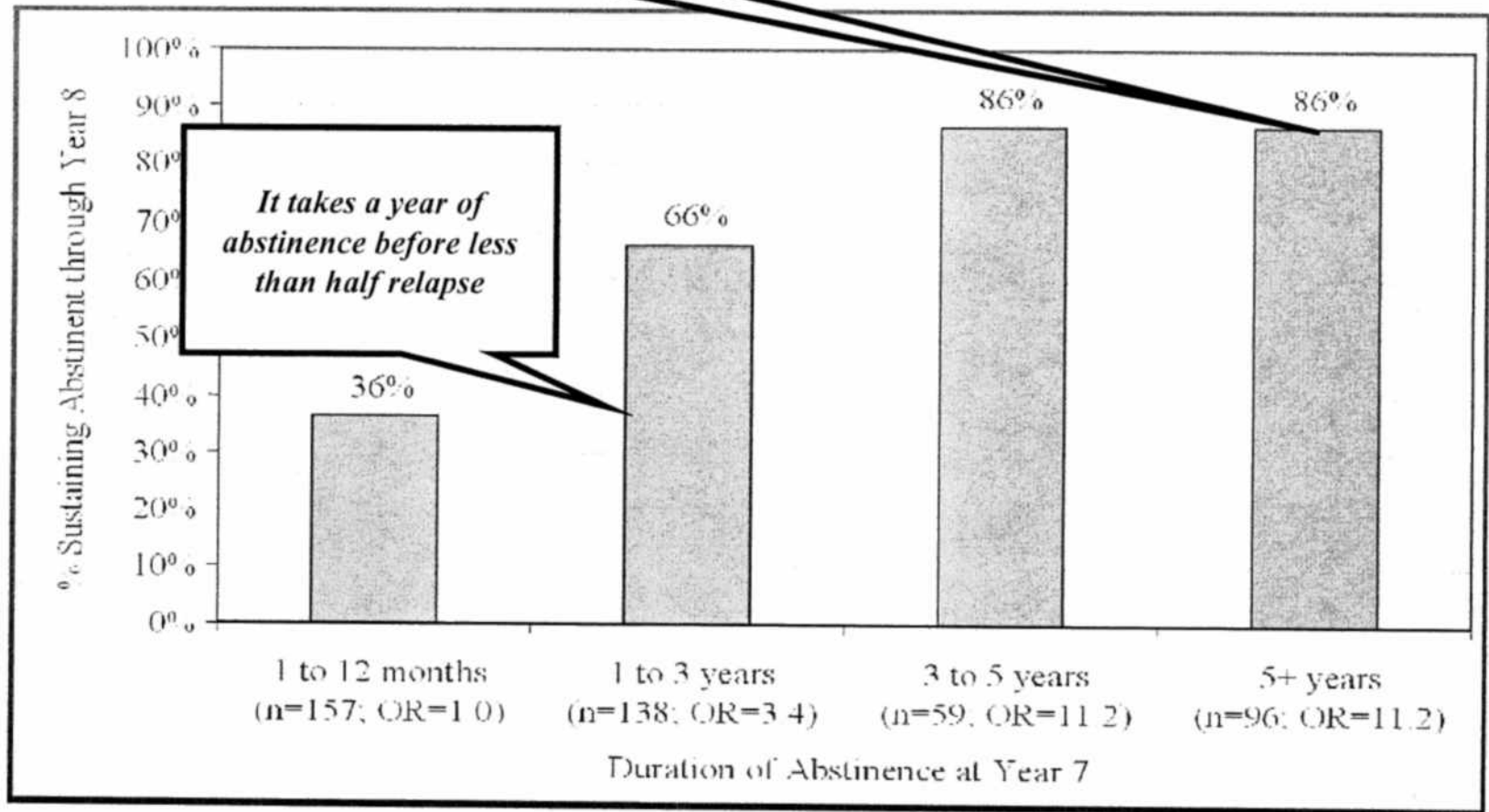


The Acute Care Treatment Model

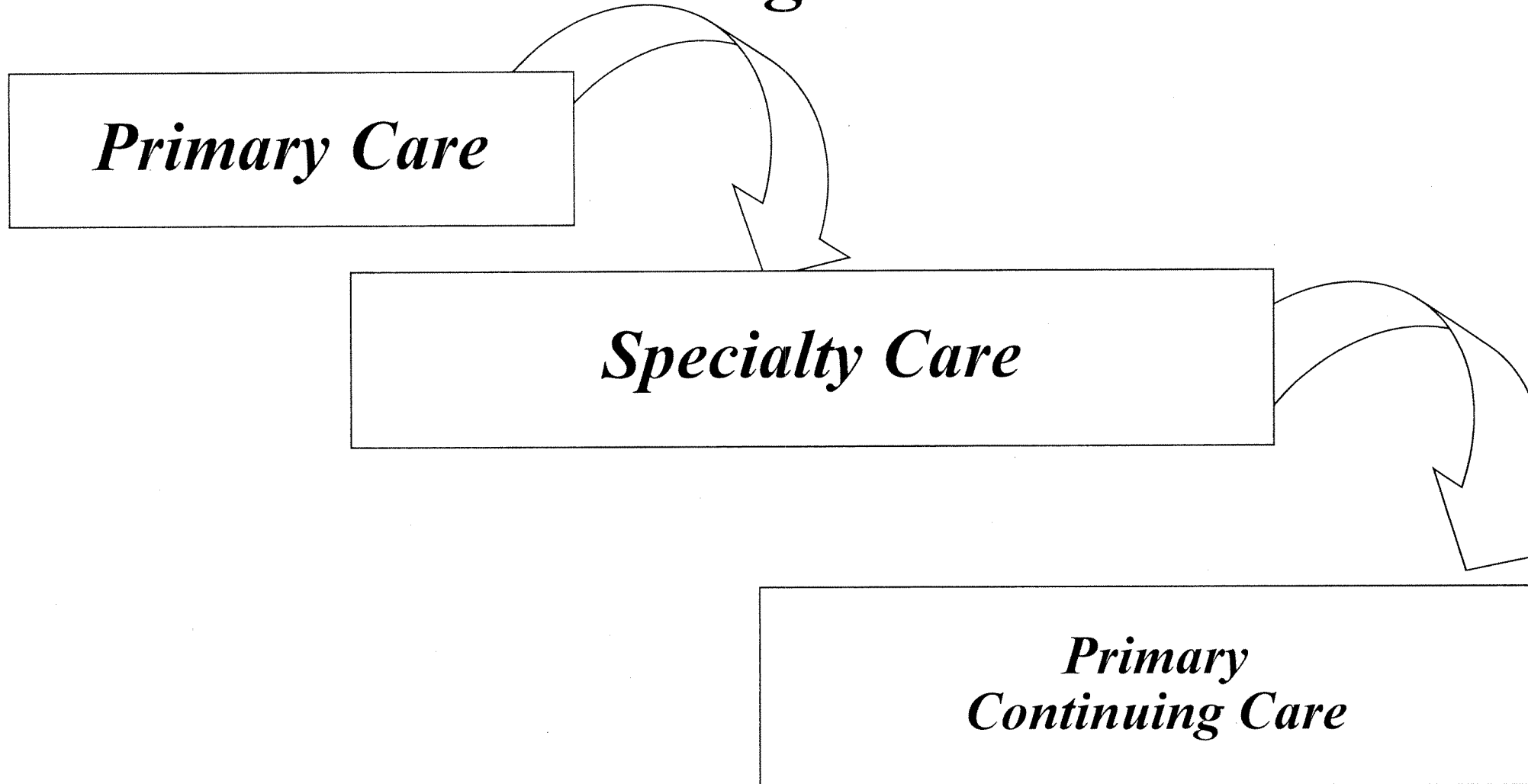


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After 5 years – if you are sober, you probably will stay that way.

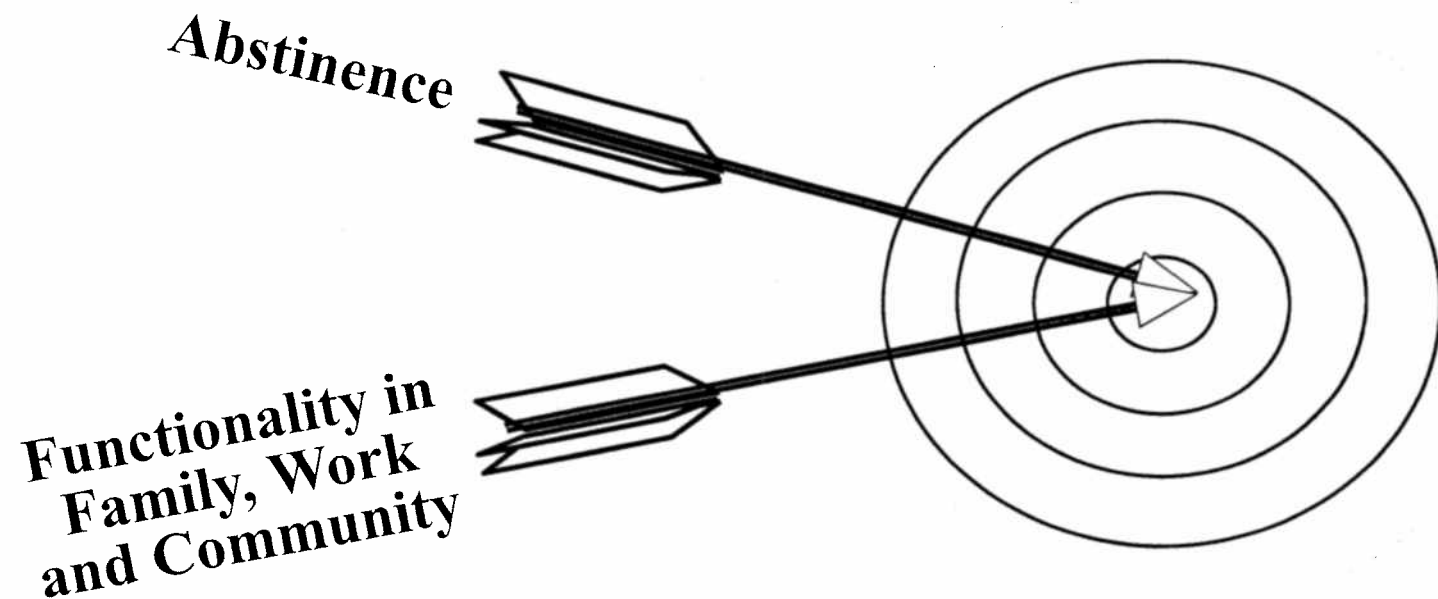


A Continuing Care Model



In Treating Addiction...

**We Need to Keep Our Eye on
the Real Target**



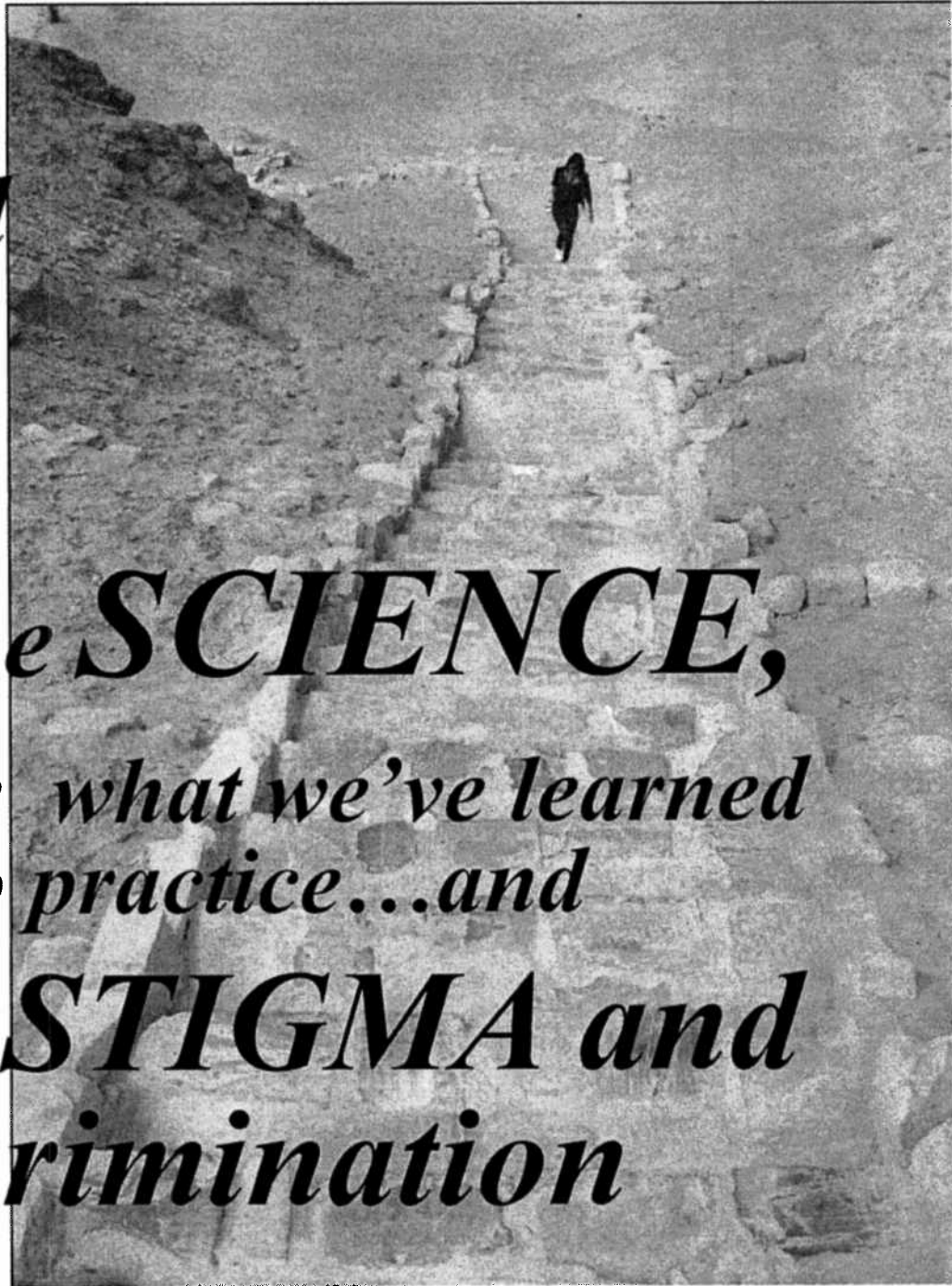
*Where Do We Need
to Go From Here?*

We Need to...

*Advance the **SCIENCE**,*

*Translate what we've learned
into practice...and*

*End the **STIGMA** and
Discrimination*



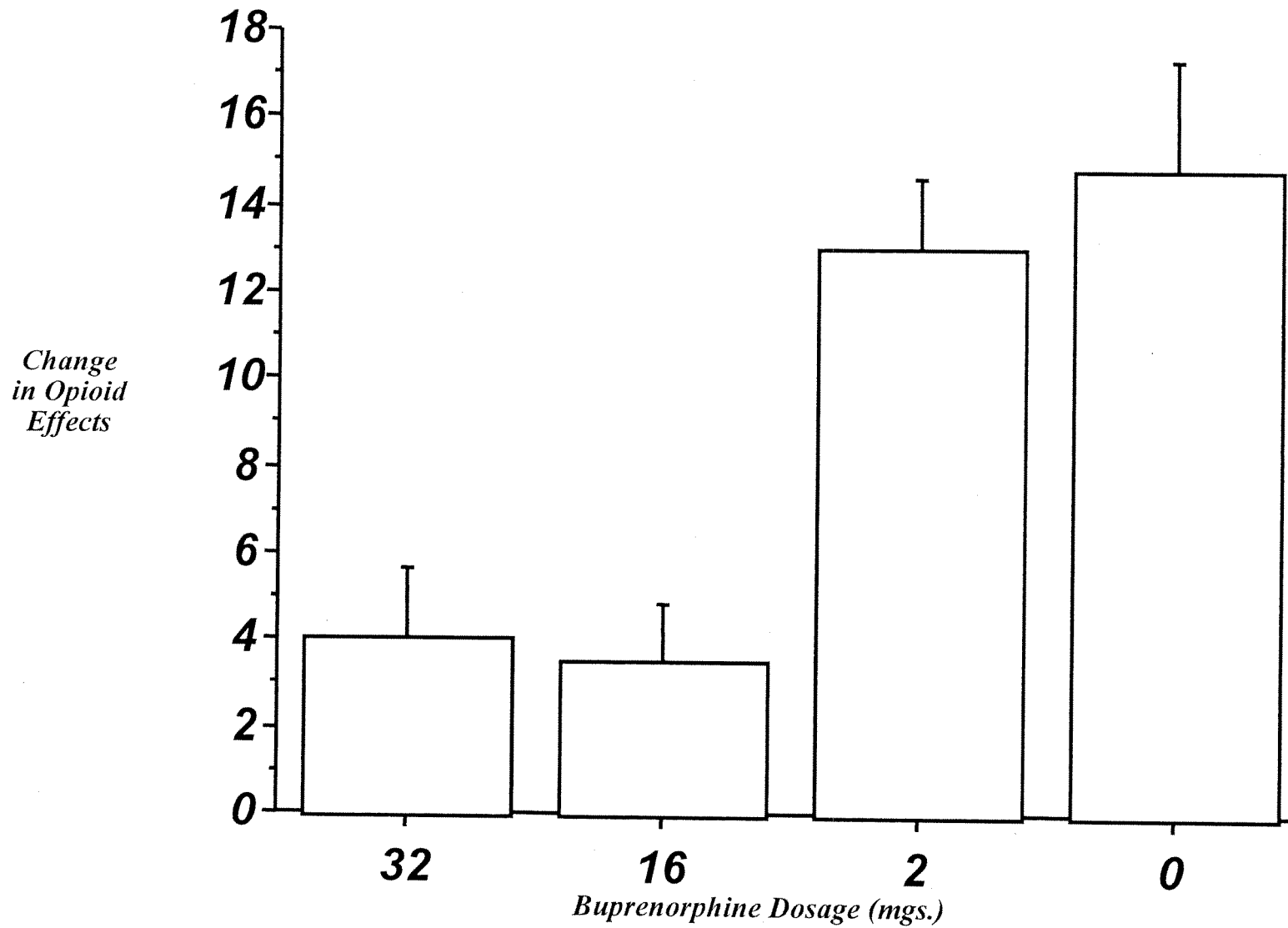
Thank you for all you do

Tcondon @unm.edu

Methadone and Buprenorphine

- Activate the opioid receptors
 - Although buprenorphine is weaker than methadone at higher doses and therefore has better safety profile
- Reduce heroin craving
- Alleviate withdrawal
- Block heroin's euphoric effects

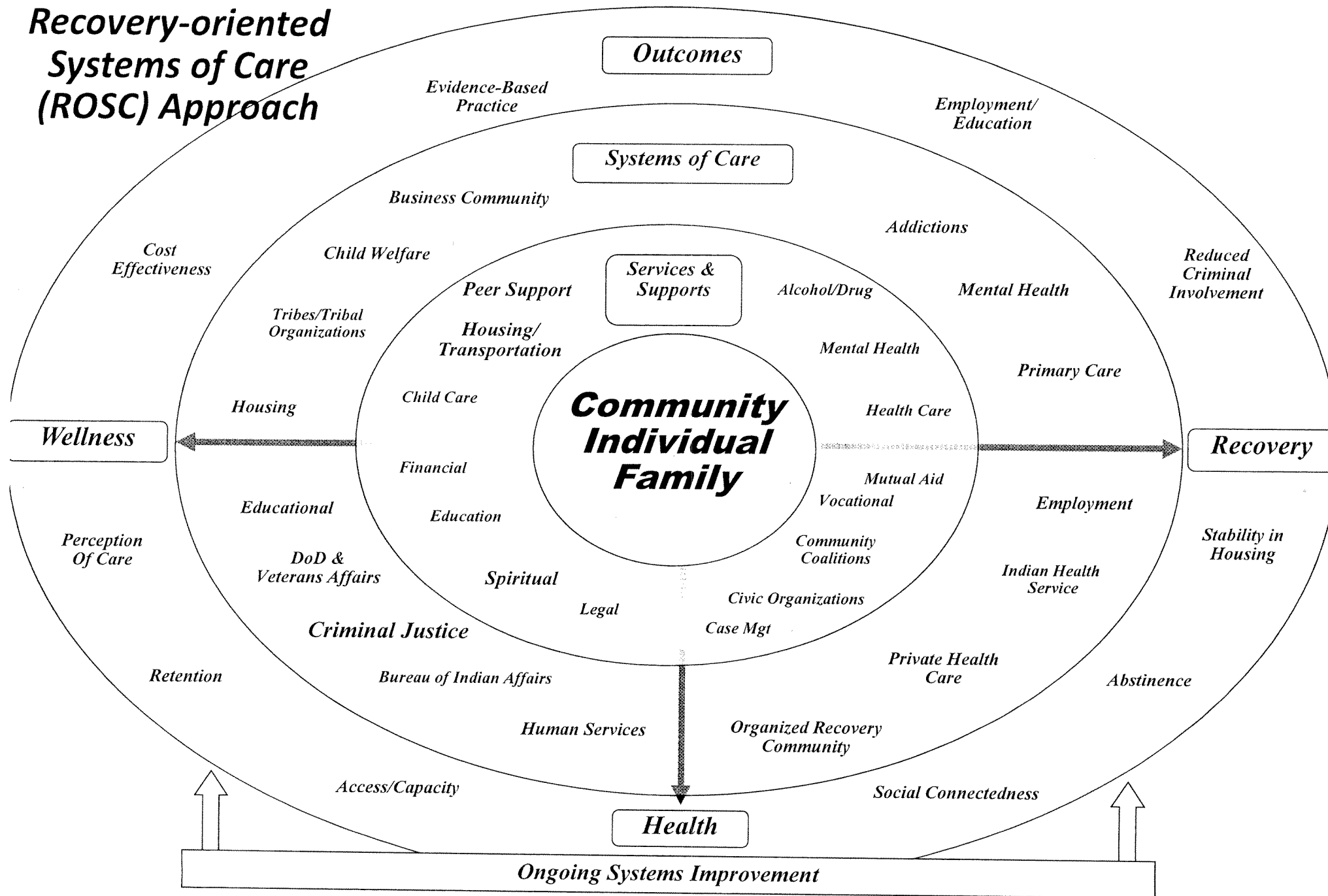
Buprenorphine Blocks Opioid's Effects



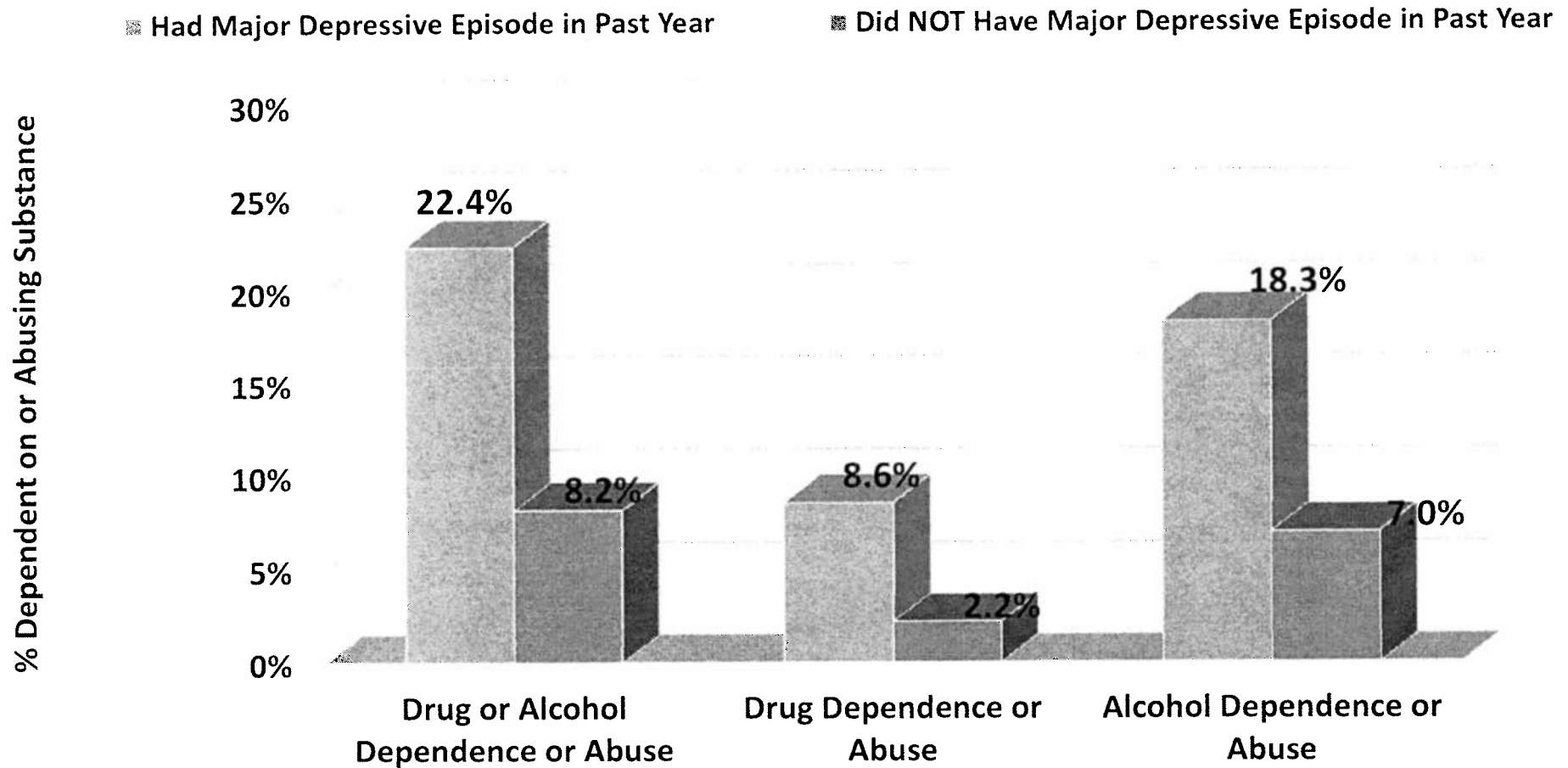
Where are methadone & buprenorphine provided?

- Opioid Treatment Programs (OTPs)
 - Methadone (mostly) or buprenorphine
 - Counseling & drug testing
 - Clinic administered dosing
 - Take home doses contingent on performance

Recovery-oriented Systems of Care (ROSC) Approach

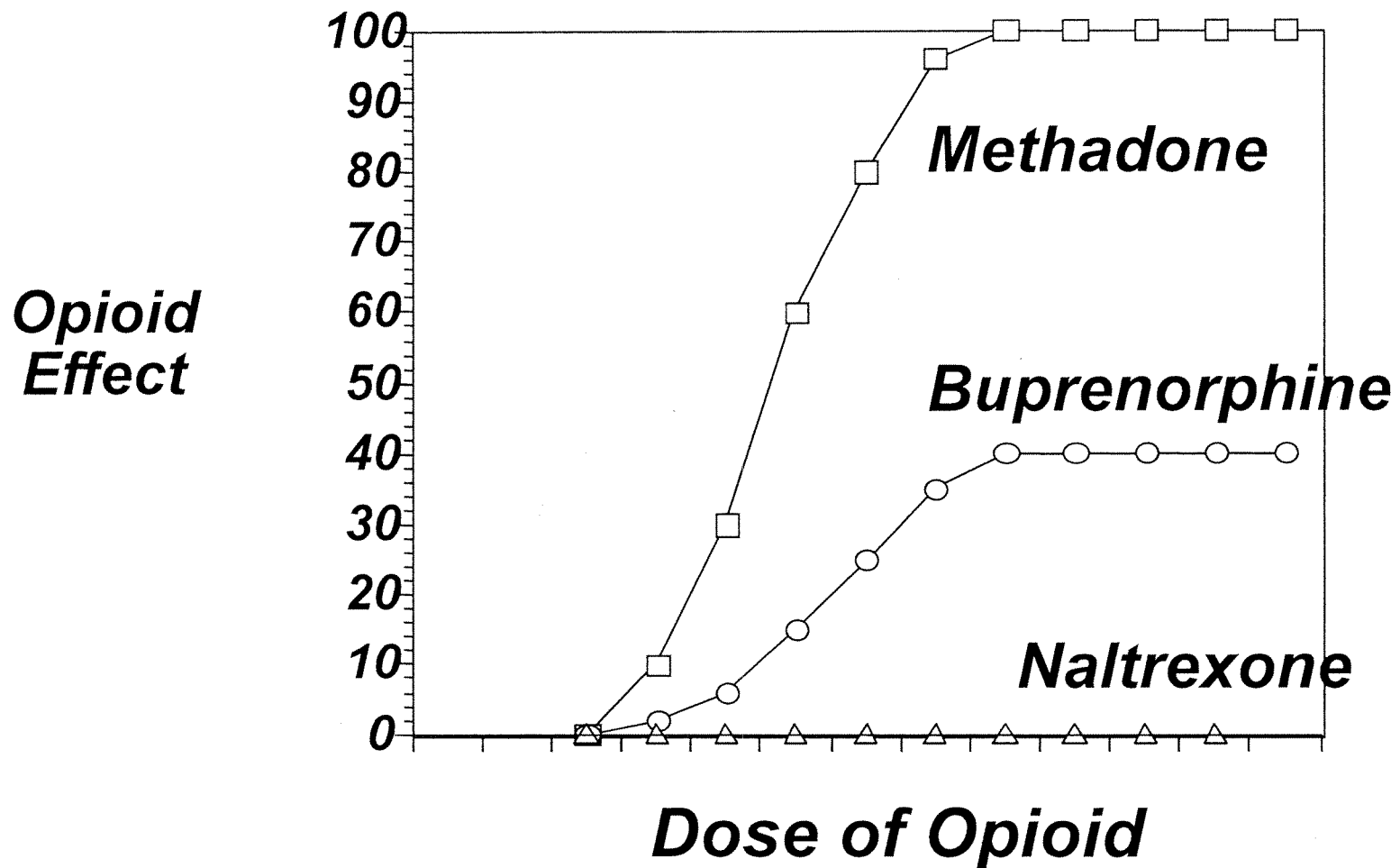


Substance Dependence or Abuse among Adults Aged 18 or Older, by Major Depressive Episode in the Past Year: 2008



Source: SAMHSA NSDUH 2009

What is the difference between opioid agonists & antagonists?



What is the difference between heroin addiction and opioid agonist treatment?

	<u><i>Heroin Addiction</i></u>	<u><i>Opioid Agonist Treatment</i></u>
Route	Injected	Oral or Sublingual
Onset	Immediate	Slow
Euphoria	Yes	No
Dose	Unknown	Known
Cost	High	Low
Duration	4 hours	24 hours
Legal	No	Yes
Lifestyle	Chaotic	Normal